REPORT ON POTENTIAL POLICY INITIATIVES INCREASING THE EXPORT OF LIVESTOCK PRODUCTS FROM MONGOLIA

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EXECUTIVE SUMMARY

The world economy is becoming more and more globalized and Mongolia is an economy in transition. It is endowed with an environment conducive to livestock raising. Mongolian meat processing industry with its comparative advantage in livestock production should consider ways of expanding sales through increased exports. This report is an investigation of the global exporting possibilities for beef, lamb, mutton and goat products. The discussion offers suggestions on how to improve the Mongolian exporting situation

Mongolia was a major supplier to the former Soviet Union, and is still a major supplier to the 10+ million people of the Eastern Siberian region of Russia. However Russia's financial crisis makes this region an undependable buyer. Mongolia needs to expand its economy through increased exports and therefore, must diversify its foreign customer base.

The first major problem to increasing trade is that nations or trading regions create obstacles by putting deliberate restrictions on international trade. Nonetheless, trading restrictions are being steadily reduced through the General Agreement of Trade and Tariffs (GATT) to which over 125 nations subscribe. The reality of the situation is that because of the GATT agreement many nations are in the process of reducing explicit tariffs and quotas, or will be challenged at the World Trade Organization (WTO), the administrative organization of the GATT. Since many of the developed nations practice high subsidy pricing programs to increase their national/regional agricultural sectors' income they are faced with the financial burden of buying-up and disposing of any surpluses generated. This means they must discourage imports by finding implicit (less transparent) means for trade protection. These less seen-through means have taken several forms over the years. It seems that there is a contest to see which country can find the cleverest way to hide its protectionist policies.

From strictly a competitive pricing standpoint, the author concludes that the Mongolian meat processing industry is one of the worlds most competitive. These factors, as outlined in the report, suggest that Mongolia must concentrate its export marketing efforts towards the economies that have not developed sophisticated barriers to trade, masking protectionist policies. To concentrate efforts towards the few major developed economies will not produce the desired results, nor will a "passive marketing approach" of waiting for buyers to appear to buy meat products. A major problem will be to develop a road and/or rail transportation regime, and its associated information network, for 20 and 40 ton refrigerated shipments. The current reliance on 135-ton rail shipments constraints export sales growth as many medium and/or smaller buyers are excluded.

The author proposes a two track marketing approach, one short-term and the other long-term. The report suggests several approaches that could increase the sales of both carcasses and value-added meat products to the traditional Russian buyers to the north. A newly appointed government "Export Czar" could

coordinate an “aggressive marketing approach” through the embassy personnel stationed in or responsible for the Southeast Asian and Middle Eastern nations.

The report relates the facts that these regions, plus some former Soviet-Bloc nations, offer the best hope for increasing meat product exports. The author also suggests a new autonomous quasi government trade association, which can provide market information, lubricate barter transactions, offer transportation networking. and various other services to the Mongolian meat processors and livestock producers. Finally, the author suggests contact with the major fast-food companies who operate in the Asian region, as they usually are looking for high quality and competitive ground beef suppliers. The author has made some preliminary contact and letters expressing their level of interest are included from Burger-King and McDonalds Corporations.

The specific conclusions reached in the report are as follows: 1) Expanding exports to Eastern Siberia will produce positive results, 2) Increasing value-added meat product exports will boost the Mongolian economy, 3) A foreign investor should be identified and offered an opportunity to set up a ground beef patty manufacturing operation in Mongolia, 4) Mongolian foreign embassy personnel identifying potential foreign buyers and relaying information back would be an excellent improvement to the MIS, 5) Implementation of activist marketing program by a special “Export Czar”, 6) Create a fair and level playing field for all Mongolian exporters, both the large state-owned “dinosaurs” and the newly started and smaller “gazelles”, 7) An autonomous quasi-government association would be preferable to the current ineffective private structure, 8) Need to facilitate 20 and 40 ton shipments, 9) Shortage of working capital caused by awkwardness of barter transactions restrict trade expansion, 10) Developing lubricating mechanisms for timber trades to China would be a tremendous step forward for meat export expansion., 11) Plant moderizations and sanitary upgrades many not produce desired results, 12) Creating animal disease-free zones will enhance the value of Mongolian livestock inventory, 13) Open and a competitive livestock trading regime will benefit the livestock sector, and 14) More effective use of factors of production will be realized by adding feeding facilities, thereby extending slaughtering beyond 100 days per year.

The recommended actions include the following: 1) Develop an Activist, rather than a Passive marketing approach, 2) Develop an autonomous quasi-government exporting association, 3) Identify an interested major ground beef patty user, 4) Create disease-free livestock zones, and 5) Develop feeding plan to extend slaughter period beyond 100 days

SECTION ONE: THE CASE FOR EXPORTING

Introduction

This report is an investigation of the current meat exporting situation of the Mongolian meat processing industry and an attempt to identify and propose any

policy options that could provide solutions to any impediments to exporting identified by the author.

The world economy is becoming more and more globalized, and Mongolia is an economy in transition. It enjoys an environment conducive to livestock raising. Therefore, Mongolian meat processing firms should consider expanding meat exports as a way of increasing sales. Furthermore, firms increasing output and taking advantage of the economies of scale would lower operating costs and become even more efficient.

Buyers of meat have expressed an interest in the high quality (natural and good tasting) of product produced by Mongolian husbandry—from the country's pristine blue sky, sound air, diverse landscapes, and abundant pastures. Additionally, Mongolia enjoys a land boundary of 4,673 km with China and 3,441 km with Russia, two major meat-eating economies.

Selling in foreign markets, however, presents several factors that should be examined. Many countries (and/or trading regions, i.e., EC, NAFTA, Japan, etc.) have tariffs, import quotas, and/or non-tariff barriers (possibly disguised as sanitary concerns) that interfere with free trade[1]. Local competition may be strong in many potential target countries, where the local firms receive favored treatment. Conventional financial collection problems, as well as currency regulations, may make withdrawal of money difficult after the meat products are delivered.

In spite of these difficulties, export business often is an attractive option. In analyzing foreign markets, as with any other new markets, the added or incremental cost should be balanced against the added income. Once the Mongolian company has completed its product engineering and is "tooled-up" for production, the cost-per-unit of turning out an added percentage is less than the total average cost of the basic output. If the Mongolian company has idle capacity in its plant, this incremental cost may be very much lower, so that even though there are difficulties in selling across borders, the net revenue received may still be above the incremental cost.

Based on the State Property Committee report, 13 March 1998, the Mongolian domestic consumption is estimated at 492,200 tons of live weight cattle, the supply being officially 32 million animals, or unofficially, 40 million animals. Based on official estimates, 12 to 20 percent are cattle. This suggests, other things equal, that 800,000 tons are in the supply and 307,800 tons are available for exporting. Additionally, according to the Strategic Planning Department of the Ministry of Agriculture, there are 2.5 million sheep and 1.5 million goats in Mongolia available for exporting.

[1] According to traditional theory, a marketing situation where no tariffs or other barriers are imposed on international trade (free trade) is always superior to a policy of national self-sufficiency and nonreliance on imports or economic aid (autarchy). Some individuals gain under free trade while others lose, but gainers offset the losers. Studies indicate that free trade is remarkably robust. The augment for "free trade" rests upon the principle of potential compensation of losers by the gainers.

History of Trade

In Table One, derived from the official Mongolian Statistical Yearbook of Main Export Commodities (meat) covering period 1975 through 1997, the following trade statistics are revealed:

Table One

NUMBER OF TONS (1000'S) OF MEAT EXPORTED 1975 THROUGH 1997

YEAR	TONS/1	PERCENTAGE CHANGE	MAJOR CUSTOMER
1975	35.7	*	USSR
1980	45.9	28.6%	USSR
1985	39.8	-24.7%	USSR
1990	24.3	-34.0%	USSR
1992	11	-120.9%	EASTERN SIBERIA
1993	7.1	-54.9%	EASTERN SIBERIA
1994	5.4	-31.4%	EASTERN SIBERIA
1995	2.2	-146.5%	EASTERN SIBERIA
1996	3.6	63.6%	EASTERN SIBERIA
1997	7.1	97.2%	EASTERN SIBERIA
1998est	10.1	42.2%	EASTERN SIBERIA
1999/2	estimated to be -4.5% from 1998		

1/ Some distortion may exist in the data, in that tons of live animals and carcass meat may be mixed.
Live animal exports ceased in 1990 and carcass form became the major export item.
There is a 60% difference in the weight, if this is the fact, then the relationship between years is distorted.
2/ Russian financial crisis is blamed for reduced exports to Eastern Siberian cities

Source:
Mongolian Statistical Year Book

The percentage changes of these statistics demonstrate the level of slippage of Mongolian meat exports over time. Mongolia was a major exporter to the Soviet Union until the breakup in 1990. The dramatic changes and volatility, specifically during the current decade, show that exports can potentially still be a vital element of GNP growth for the Mongolian economy. Some distortion of the numbers exists, as major portions of the exports in the earlier years were livestock, and in the later years are carcasses. This means that the tonnage of carcasses is only 60 percent of the tonnage of live animals. The aggregate statistic does not differentiate this factor. This means that current exports in 1997 of 7.1 tons might be, in live animal terms, 11.9 tons, thereby distorting the interpretation of the above statistics. There is some discrepancy if we examine Table Two, which is the data dis-aggregated by species. I can not explain the difference in quantity.

Table Two

MONGOLIAN MEAT EXPORTS
BY SPECIES 1995 THROUGH 1998

	1995	1996	1997	1998
ANIMALS				
Horse				
Cattle	231.1			
Pig				
Poultry	16.3			
Other		6.8	540.3	48.6
Totals	**247.4**	**6.8**	**540.3**	**48.6**
MEATS				
Beef Fresh	146.6	326.1	861.9	226
Beef Frozen	2531.6	4434.9	9036.5	8263.3
Pork	0.7			
Sheep Meat	85.9	168.3	10.8	725.2
Goat Meat	75.3			
Horse Meat	2.3	57	82.7	248.6
By Products	472.3	816	503.2	616.8
Poultry Meat		8		
Other	8.8	142.6	82.8	39
Fat				
Smoked Meat	557.3	7	16.5	
TOTALS	**3880.8**	**5959.9**	**10594.4**	**10118.9**

% Change From Prior Yr.	***95 TO 96***	***96 TO 97***	***97 TO 98***
	53.6%	**77.8%**	**-4.5%**

Source:
Ministry of Agriculture of Mongolia

Contribution of Expanding Meat Exports

Exports can serve as a source of market expansion for Mongolian livestock producers. Increased exports generally have an additional positive effect of raising livestock prices. (The efficiency of this transfer is dependent on the state of the meat processing industry's competitive structure—the buyers of the livestock.) Thereby, exports traditionally should raise livestock producer incomes by providing a growing market for their output.

Secondly, participation in world markets provides incentives for increasing efficiency (productivity and output) of Mongolian agriculture. Indeed, the ability to compete in world markets is one test of whether Mongolia should be an exporter or an importer of certain commodities. Trade and international competition

provide market signals on farmers' decisions and resource efficiency. Therefore the potential exists for increasing total output and consequently the rural Mongolian standard of living, through increased economic exposure of the rural sector to international trade. These same competitive forces will also influence the meat processing industry, which should experience dynamic increasing returns

Thirdly, increased export trades also make an important contribution to the Mongolian balance of payment account. Increased export of meats allows for increased imports of needed goods without negative foreign exchange repercussions. The fact that barter also is a factor in exporting does not change this benefit, except that it is not in monetary terms. Current barters are for gasoline, diesel oil, and timber. If Mongolia must import gasoline and other oil products, the direct trading for meat, although not in monetary terms, yields similar economic benefits. Actually, trading meat for timber and then exporting the timber to China is an *excellent way to circumvent the Chinese protectionist policy against meat imports.* The demand for timber in China is apparently quite great, and that brokerage of intermediary trade from Russia to China, although awkward, can be profitable.

Increased trade also influences the volume, variety, and price of the food supply for Mongolian consumers. Money earned from food exports by agribusiness employees can be used to purchase other goods desired by the down-line, non-farmer consumer. International trade allows creation of an integrated market that is larger than any one country's market, and thus makes it possible simultaneously to offer consumers a greater variety of products at lower prices.

It is also observed that trade plays a role in international diplomacy and foreign relations. It is often true that "two nations trading bushels and boxes are less likely to trade insults and/or bullets."

SECTION TWO: THE IMPEDIMENTS TO TRADE

Explicit Barriers to Trade

The first major obstacle to trade is that nations or regions put deliberate restrictions on international trade. Governments impose significant explicit *barriers to trade*. Tariffs, import quotas, and their variations have traditionally separated national economies. Nevertheless, tariff barriers among advanced industrial countries have steadily been reduced through the General Agreement on Trade and Tariffs (GATT) to which more than 125 countries subscribe and through the creation and growth of the World Trade Organization (WTO). Over the years, major countries have formed free trade zones that are free from such restrictions, but significant barriers are placed around the outside perimeter of the zone.

For example, trades among the member countries of the European Community (EC) is free from tariffs and import quotas; however, such restrictions have been placed on goods entering the EU borders. The additional complication for Mongolian meat exports is that the EU has subsidies to agriculture within the zone. This means that European meat prices are higher then the world price. In other words, the agriculture sector has government supported price levels, not market-driven prices. This results in higher EU farmer income, but generates huge surpluses of commodities; the EU organization in Brussels must buy-up and store, then find a way to get rid of the excess outside the zone. In the case of meat, there are tons of excess products that must be dumped somewhere, such as Russia, with limited impact on demand within the zone (this type of activity generates much trade friction between major trading nations).

This notion is not only practiced in trading zones; some nations, such as Japan have similar policies and problems. The USA does not have the level of subsidies of the EU or Japan, but does have some subsidies to protect. Recently, the USA has entered a free trade zone agreement with its neighbors, Mexico and Canada. However, the tariffs are not being eliminated immediately, but slowly, item by item, over the next ten years. This NAFTA agreement has sparked great controversy with USA labor interests and within the US agricultural sector, but more importantly, this complicates the Mongolian desire to export meat to the USA.

Subsidies are only one form of protection. Direct measures to exclude or restrict imports are used to protect national industries and/or sectors. For example, the USA has direct import quotas on manufacturing type meat (similar to meat produced in Mongolia) imported from New Zealand, Australia, Central America, Argentina, etc., to protect USA cattlemen. The US livestock sector has even tried to get additional protection by having all products with imported meat content labeled as such, to deter consumer purchases.

Implicit Barriers to Trade

Most modern nations, legitimately so, impose health and quality standards on food. These standards are designed to assure consumers that when they buy food it is safe from contamination of micropathogens, chemicals, insecticides, and other undesirable elements. Additionally, labeling for material content, nutritional content, additive content, etc. is an important basis of the sanitary and labeling requirements.

Therefore, trade restrictions based on sanitary or quality requirements are justifiable extensions of government concern. I have included in Annexes AA and Bill Bikales the basic USDA and EC sanitary requirements for meat processing facilities, as well as, in Annex CC, the ISO 9000 worldwide quality control standard requirements. I have also included in Annex GG the veterinary health requirements for the livestock of any potential exporter by the importing country. I am sure a Foot & Mouth (FMD) USDA certified-free zone is required, and possibly a Brucellosis-free zone to ship fresh or frozen meat to the USA. This will be a major restriction of the Mongolian livestock sector. In fact, it took 20 years for Argentina to obtain such certification, since their last outbreak.

The reality of the situation is that, because of the GATT agreement, many nations and regions are forced to reduce tariffs and quotas or be challenged at the WTO. This leaves a financial burden on each government whose economy is generating surpluses (caused by high subsidy pricing) to find implicit (less transparent) means for protection. In other words, there is a hidden agenda in trade policy. These less seen-through means have taken several forms over the years. It seems that there is a contest to see which country can find the cleverest way to hide its protectionist policies. They have taken several generalized forms: 1) rules that generate large amounts of red tape; 2) inspection standards requirements upon entry, with under-staffed customs inspection personnel; 3) the level of sanitary requirement approval; and 4) the degree of nutritional concerns, etc. All of these methodologies are in place at major countries' borders, especially regarding, but not limited to, food items. It is beyond the scope of this discussion to elaborate on these hidden agenda methodologies, except to say that in the author's view, they materially affect the Mongolians' ability to export to the major developed economies.

Price Barriers to Trade

For the EU nations, price competitiveness is not the concern. The EU "gate price" tariffs raise any imported lower priced products to the same internal EC price, effectively stopping imports. This is not the case in the USA. Assuming all sanitary requirements have been met and no limiting quotas have been reached, the market is open. The next concerns would be the demand and the competitiveness of the price.

USA meat demand takes two forms: 1) table grade meats, i.e., steaks and roasts, etc., and 2) manufacturing beef, i.e., ground beef, sausage making

materials, etc. USA imports of frozen beef and veal, mainly manufacturing beef from the designated countries, show the following:

	1997	1998	Value/ USD/Ton
CANADA	268689	300278	2244
MEXICO	2930	2500	2540
GUATEMALA	143	0	1607
HONDURAS	5108	913	2015
NICARAGUA	13419	7129	1921
COSTA RICA	12207	9197	2196
URUGUAY	19805	13432	1898
ARGENTINA	5515	7163	2290
AUSTRALIA	213123	284787	1659
NEW ZEALAND	191655	197474	1709

Mongolian boneless-type product would be a perfect substitute for Australian and New Zealand manufacturing beef. There is a very good demand for this type of meat from fast-food chains and supermarkets. The issue to evaluate is price. Based on the last six months, let's look at the price levels of certain comparative USA beef products:

United States Prices

USDA Choice Table Meat Carcass .....2,112 USD/ Ton
USDA Select Table Meat Carcass .....2,002 USD/ Ton
USDA Utility Grade Carcass.....1,452 USD/ Ton
Live 500Kg Animal.....880 USD/ Ton
Boneless Beef Carcass 90% .....2,200 USD/ Ton
Beef Trimmings 85% .....1,980 USD/ Ton
Beef Trimmings 75% .....1,760 USD/ Ton
Australian 90%.....1,980 USD/ Ton
By-Product Value (A/K/A Drop[2] .....144 USD/ Ton

[2] The drop value for US cattle is extremely low as US consumers have little desire to purchase these items. A large portion is exported.

Current Mongolian export market prices discovered during my survey are as follows:

Mongolian Prices

Live 300 Kg Animal	280 USD/ Ton
Beef Carcasses	1,200 USD/ Ton
Bnls Beef Carcasses-85%	2,068 USD/Ton
By-Product Value	220 USD/ Ton

These current USA prices are a bit low. Due to the Asian financial crisis, exports of table meat and pork have dropped dramatically, putting downward pressure on USA manufacturing beef price levels. In general, I would say that after considering the potential gains from the benefits of "economies of scale" in Mongolian slaughter plants, the prices of Mongolian meat might be considered competitive in USA market, but with no extensive discount.

Another topic that has been suggested is the selling of Mongolian meat products to the USA pet industry. I have listed below an illustration of pet food raw material pricing published by the USDA Market News Service. These prices are fairly stable and have very little noise. As follows:

Beef Pet Foods - FOB Supply Point

Quarterly Contracts	Frozen Boxed
Gullets-Trachea	231/ USD /Ton
Kidneys, inedible	231/ USD /Ton
Livers inedible	275/ USD /Ton
Lungs, inedible	209 / USD / Ton
Melts, inedible	198 / USD / Ton
Salivary Glands	264 / USD / Ton

Pork Pet Foods – Fob Supply Point

Quarterly Contracts	Frozen Boxed
Kidneys, inedible	276/ USD /Ton
Livers inedible	286/ USD /Ton
Lungs, inedible	154 / USD / Ton
Melts, inedible	231 / USD / Ton

Source: www.ams.usda.gov/mncs/mn_reports/nw_ls440.txt

The above data suggests that the low value of "drop products" that are supplied to the USA pet food industry makes Mongolian "drop products" uncompetitive, especially after freight considerations. Most of the world values these products

much higher than the USA market. The USA tries to export these products, but because of the high volumes (USA daily slaughter is 130,000 cattle, 380,000 hogs and 15,000 lamb), most is supplied to pet food industry at the levels indicated above.

"The Mongolian manufacturing beef industry may be one of the most competitive in the world," comments the author

The above data illustrates that the Mongolian manufacturing beef industry is one of the most competitive in the world. I have personally visited many developed and underdeveloped economies and seen the state of their meat industries; I find most are not competitive.

I wish to commend the Mongolian industry for their attainment of such an aggressive price level.

Now, Mongolian meat industry and government policy makers must benefit from this comparative advantage by seeking out those economies where protectionist tendencies have not overwhelmed the economics of the trading environment. I will reveal and discuss my suggestions in the next section.

SECTION THREE: THE CURRENT EXPORTING SITUATION

Structure of Trading Participants

The essence of this section is based on interviews of the major participants in the Mongolian export activities and is co-mingled with my own views and impressions. Therefore, I suggest that the reader turn to the Appendix section and read the interview notes before continuing.

The major emphasis on the Mongolian version of international trading seems to focus on selling large, 135-ton rail cars to the big Russian importers near the border cities in Eastern Siberia (the aggressive marketing approach). All other trading (except some by-product transactions to Chinese traders) seems incidental and only occurs if and when a buyer comes to Mongolia to inquire about trading (the passive marketing approach). The result of this activity is that a few firms and individuals seem to gain, while the workers and the livestock sector seem to derive minimal benefits.

This situation occurs as the current meat processing participants have monopsony power over the livestock sector, as well as monopoly power over other aspects of the trading regime. One interviewee called the Mongolian meat exporting industry a world of “dinosaurs and gazelles,” meaning that the prominent current players (the dinosaurs) try to maintain a status quo situation, and they respond to changes only if it propagates their own monopolistic self-interests. The gazelles, who do make transactions and move forward, are blocked or slowed down by the actions and activities of the dinosaurs.

Any suggested changes to the international trading regime must take into account this structure (constrained market). Any new initiatives must be designed so that the dinosaurs and the gazelles get a fairer playing field (open market) and changes are not made that continue the status quo and maintain the current noncompetitive environment. It is in the nation’s economic interests to both increase exports and assure that the benefits are distributed throughout the economy and not into the pockets of the few. Additionally, opening up the livestock buying process to greater competition would go a long way to improve the livestock producers’ well being. For additional information purposes, I have included in Annex DD discussion of a model of a competitive auction market for livestock procurement. It might be instructive to review this model and measure it against the current Mongolian methodology. Maybe some parts of this model can be adopted in Mongolia.

Two Track Marketing Approach

The steps to expanding exports have two tracks, one short-term and one long-term. The short-term track is to expand the current activity, mostly selling commodity-type product (the frozen beef carcass). However, because of the fact that the Russian buyers are mostly major distributors, it is not in their best interests to buy value-added products, i.e., boneless, tinned, smoked, and

sausages, because that is what *they are doing* using Mongolian raw materials. To change this situation, Mongolian gazelles must be helped to penetrate these barriers. Then they can sell value-added products directly to the large Russian importer's distribution systems, (who sell to the 10+ million consumers of Eastern Siberia), thereby transferring the economic benefits of value-added sales to the Mongolian economy from the large Russian monopolists. Because the Mongolian economy has made such a large investment in modern meat processing equipment already (most of which is idle), this strategy of bypassing the Russian buyer would allow a chance for a return on this enormous Mongolian investment.

According to official Russian statistics, agricultural production in 1997 fell 9 percent. The grain harvest totaled 81 million tons, some 15 million tons less than in 1996. Imports were up 8 percent as demand for food surged, and no production improvement is expected soon. This means that Eastern Siberia's dependence on the Mongolian meat supply can be expected to grow in the near future. Using USDA statistics, Russia's beef production is 2,500,000 tons, its imports are 650,000 tons, and its exports are 5,000 tons. This computes to a disappearance (consumption) of 3,150,000 tons per year. Eastern Siberia (with its permafrost conditions) represents about one fifteenth of this demand (210,000 tons), while it has a very low comparative advantage in growing domestic livestock to fulfill this demand.

See Table Three, which indicates the five large cities in eastern Siberia that could be easily sold, according to my industry sources. Note the projected sales over the period 1999 through 2002. They project doubling the market share from today's 4.8 percent to 10.4 percent during that period. Also, note the financial gain for the Mongolian economy based on these projections.

Table Three

POTENTIAL EXPORT MARKETS
EASTERN SIBERIA

CITY	POPULATION	DISTANCE/kms	IMPORTS/tons
IRKUTSK	2,800,000	1,000	15,000
KRASROYARSK	3,100,000	1,500	30,000
NOVOSIBIRSK	2,700,000	2,000	70,000
NOVOKUZNETSK	1,000,000	2,000	20,000
ULAN UDE	600,000	1,000	10,000
TOTAL MARKET	10,200,000		**145,000**

PROJECTED EXPORTS TO EASTERN SIBERIA

		Mkt Share		Mkt Share		Mkt Share		Mkt Share
	1999	**4.8**	**2000**	**7.6**	**2001**	**9.1**	**2002**	**10.4**
	Tons	**USD**	**Tons**	**USD**	**Tons**	**USD**	**Tons**	**USD**
CARCASS TERMS	7,000	**8.4million**	11,000	**13.2million**	13,000	**15.6million**	15,000	**18.0million**
LIVE TERMS	11,667	**7.9million**	18,333	**12.5million**	21,667	**14.7million**	25,000	**17.0million**
BONELESS TERMS	4,662	**9.6million**	7,326	**15.2million**	8,658	**17.9million**	9,990	**20.7million**

Using:
230 USD/ton for live
1200 USD/ton for carcass
2068 USD/ton for boneless

Source:
Industry Projections

The second track, the long-term, is more complex. Mongolian meat processors and policy makers have been eager to export meat to the major developed nations, such as Western Europe (EU), the USA, and Japan. As the author discussed earlier, protectionism, co-mingled with sanitary requirements, indicates that trying to meet the sanitary requirement will be a very time-consuming exercise and may not even be possible. Because of animal diseases and the very high bar set for sanitary issues, it would be, in the author's view, not feasible to reach the lofty goal of exporting to at least two of these economies, the EU

and USA. (See Annex AA, BB, and CC for requirements.) Japan offers some possibility as they are interested in horsemeat, and if Mongolia develops a viable hog-raising industry, they might need value-added fresh pork. However, another possibility does come to mind.

Middle East, Eastern Europe, and Southeast Asian nations are natural market for Mongolian meat products.

Many developing economies in the Middle East, Southeast Asia, and Eastern Europe do not have such a high level of comparative advantage of growing livestock as Mongolia. Nevertheless, they have meat-eating consumers, which means they must import meat products into their economy.

These countries and regions may not have developed their sanitary and phytosanitary requirements and their protectionist views to the impeding levels of the EU, Japan, or the USA. Hence, they are a natural market for expanding trade of Mongolian meat products, both commodity type and value-added type. How to market to these regions is not as simple as marketing to the Russian market, but it is feasible. Many of these countries have and are developing reforms to open up their economies to a more liberal trading regime. This process will accelerate over the next few years because of the GATT and WTO situation. This offers an opportunity for an aggressive marketing campaign from the Mongolian trade negotiators to actively pursue new marketing opportunities.

EAST ASIA

For example, China has, since 1992, committed to open its doors to imports and base its restrictions on sound science. It signed a Memorandum of Understanding (MOU) to dismantle barriers and gradually open its markets. This pressure to liberalize is based in the fact that China is trying to join the World Trade Organization. This offers the Mongolian trade negotiators a timely opportunity to put additional pressure on China to crack a small opening of its markets to Mongolian meat exports. (Source: http: //www.state/ www/issues/ economic/trade_reports/eastasia). Additionally, the USDA estimated the annual per capita disappearance in pounds per person for China as follows: Beef & Veal, 9.5; Pork, 75.2; and Lamb, Mutton & Goat, 9.7. Based on the large population times the per-person disappearance, large quantities of these commodities are being consumed, and the logic of importing from a competitive neighbor like Mongolia must be gaining more force. China's total beef production for 1997 was 55,400,000 tons, and they imported only 3,000 tons of beef in 1997.

Korea, for example, has agreed to expand its beef quota to 225,000 tons by the year 2000 and will remove all non-tariff barriers to beef imports, including state-trading operations, by January 2001. A word of caution is that import authorities in Korea have found E-coli and Listeria pathogen bacteria on imported beef shipments. This means that Mongolia producers must maintain a high sanitary level to control contamination of the beef products being exported. Currently the USA is challenging some non-tariff barriers relative to food labeling at the WTO. Mongolian trade negotiators again have an opportunity to open up the Korean market to beef and/or mutton value-added product exports to South Korea.

(Source: http: //www.state/ www/issues/ economic/ trade_reports/ eastasia.) Additionally, the USDA estimated the per capita disappearance in pounds per person as follows: Beef & Veal 21.6; Pork, 42.3. Korea's total beef production for 1997 was 308,000 tons.

Hong Kong is a member of the World Trade Organization (WTO), but is not a party to the WTO's plurilateral agreement. Hong Kong is a duty free port with no quotas or dumping laws, and few barriers to imports. However, Hong Kong does require import licenses for meat and livestock products. The stated rationale for most import licenses is to ensure that health standards are met. (Source: http://www.state/www/issues/economic/trade_reports/eastasia.) Additionally, the USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal 22.5; Pork, 122.2. They imported over 50,000 tons of beef in 1997.

In Malaysia, tariffs are the main instrument used to regulate imports, but import licenses are also used. Duties for processed and high value products such as canned food range from 20 to 30 percent. For example, tariff quota for chicken parts is a zero import duty. Imports are regulated through licensing and sanitary controls and hold imports lower then those called for during the Uruguay Rounds. (Source: http: //www.state/ www/ issues/ economic/ trade_reports/ eastasia.)

Thailand instituted tariff reductions beginning in January 1995. The Thai government is easing imports of farm products. Typically, import duty reductions are in line with WTO commitments, and this may be expected to improve market access for agricultural products. Nevertheless, duties on high-value fresh and processed foods remain high, even through rates are slated to decline 35 to 50 percent under WTO rules. There are no longer specific duties on high-value fresh and processed foods, except wine and spirits. This upcoming period of lessening of restrictions is the opportune time for Mongolian trade officials to bring some negotiation skills to open the Thai markets. (Source: http://www.state/www/ issues/economic/trade_reports/eastasia.)

Trade reforms of the Philippines have greatly reduced import restrictions. Additionally, there has been some liberalization of trade restrictions within the free-trade zone of Subic Bay and Clark AFB. The government has indicated its intentions to terminate some restrictions by the year 2000. Again, it seems the right time for Mongolian trade negotiators to try to open this market to Mongolian meat products. (Source: http: //www.state/ www/issues/ economic/trade_reports/ eastasia.) Additionally, the USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal 7.7; Pork, 28.7

Singapore has one of the world's most liberal and open trade regimes. Approximately 98 percent of imports enter duty-free. Import licenses are not required and customs procedures are minimal and highly efficient. The government became part of the WTO agreement in 1997; therefore, there are minimal non-tariff barriers to foreign goods. (Source: http: //www.state/ www/issues/economic/trade_reports/eastasia.) Additionally, the USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal 14.1; Pork, 69.2.

Accession to the WTO Agreement by Taiwan could open markets for some Mongolian goods. Taiwan standards on food products, such as accepted tolerance on pesticide content, stringent testing of microbiological levels, chemical testing, and standards of preservation levels all have acted as non-tariff barriers to importing food products. However, Mongolian products do not have much of a problem in these areas. Imports of 264 categories have been banned, including ammunition and some agricultural products. It seems logical that liberalization will first begin with the agricultural products. Mongolian negotiators should be diligent and look for openings for the importation of Mongolian beef products to this small, inefficient cattle-raising region, which has a high degree of meat eating potential. (Source: http:/ /www.state/ www/issues/ economic/trade_ reports/eastasia.) Additionally, the USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal 7.7; Pork, 69.2. Taiwan's total beef production in 1997 was only 6,000 tons, and they imported 72,000 tons of beef in 1997

In Indonesia, government departments and state regional government corporations are expected to use only domestic goods to the maximum extent possible. However, this is not mandatory for private firms. Recent liberalization of the economy (note election results 1999) indicates the potential for importing foreign goods might have increased. Mongolian trade negotiators must be quick to act in identifying the potential in this changing trading environment in Indonesia. (Source: http: //www.state/ www/issues/ economic/trade_reports /eastasia.)

MIDDLE EAST

In Saudi Arabia, import licensing is the primary method for controlling imports. Most suppliers operate through a Saudi Arabian agent. Saudi Arabia is currently being ascended to the WTO. Restrictions on shelf life of some agricultural products might restrain imports of food products. However, the author notes that this region of the world is very interested in importing fresh meat carcasses, *slaughtered under special Moslem religious conditions*, and never refrigerated. (air-shipments from Bagakhangai Co.). Mongolian trade officials must identify these requirements and expand contacts to offer this type of beef and/or mutton/goat product to these special buyers. (Source: http:// www.state/www/ issues/ economic/ trade_reports/neareast.) Additionally, USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal, 8.4; Lamb, Mutton & Goat, 28.2. They imported 60,000 tons of beef and 55,000 tons of lamb, mutton and goats in 1997.

In Egypt, five different ministries or agencies make rules for agricultural imports and issue permits: Agriculture, Health, Economy, Industry, and Scientific Research. These rules conflict with international practices. For example, the Ministry of Health's regulation for labeling processed foods conflicts with those of the Ministry of Industry. Further, Egypt sets the shelf-life of processed food products by regulation, as opposed to the standard international practice of allowing producers to determine the life of their products. Product specification also can be a barrier to trade. For example, Egyptian standard no. 1522 of 1991

concerning inspection of imported frozen meat requires that meat imported for direct consumption contains no more than seven percent fat, a level never reached in premium beef exports. The USA is challenging some standards at the WTO. Decrees recently issued require that the name and address of the Egyptian importer be placed on each package, a problem for most major suppliers to Egypt; however, a point that the Mongolian supplier may be able to accomplish. Again, this is a part of the world deeply interested in fresh un-refrigerated carcass meat, slaughtered under Moslem rites. This offers the Mongolian meat supplier a special opportunity to be flexible enough to meet these requirements. (Source: http: //www.state/www/issues/economic/ trade_reports/neareast.) Additionally, USDA estimates the per capita disappearance in pounds per person as follows: Beef & Veal, 17.0; Lamb, Mutton & Goat, 3.1 They imported 70,000 tons of beef and 6,000 tons of lamb, mutton, and goats in 1997. The author has made contact with an individual who deals with the largest meat importer in the Mideast, but is not able to identify the name at this time. This importer supplies all the countries identified below.

In Bahrain, processed food product imports are subject to strict shelf life and labeling requirements. The government makes major purchasing decisions through the tendering process. Major purchases are extended to invitations to bid from the Ministry of Agriculture, to selected prequalified foreign firms. Mongolian information gatherers must research the particular specifications and other requirements for the purchase of frozen beef and/or mutton/goat meat and pass this information back to Mongolian suppliers. (Source: http: //www.state/www/ issues/economic/trade_reports/neareast.)

In Oman, a license is required for all imports. Although, currently not a member of WTO, they have decided to apply for assertion. This means that the pressure to open markets to trade will be pushed to the forefront of government activities. Again, this offers Mongolian interests to explore the possibilities of the special Moslem rites, slaughtered beef and mutton, goat carcass, or boneless meat for consumption by Omen consumers. (Source: http://www.state/www/issues/ economic/trade_reports/neareast.)

In Kuwait, there are no customs duties on food and many agriculture items. Kuwait is a current member of the WTO. Kuwait maintains restrictive standards that impede the marketing of many food products. For example, processed foods' shelf live is often set far shorter then necessary. However, for perishable imports arriving via air, land, or sea, customs clearance is prompt and takes about three hours to complete. Recurring perishables can be cleared and taken to importers after a sample has been submitted to the municipality for quality testing. (Source: http: //www.state/ www/issues/ economic/ trade_reports/neareast.)

In Jordan, strategic food commodities require prior clearance that might be considered an import license requirement. All imports are subject to testing by Standards and Measures Corporation laboratory testing. Overlapping areas of authority and difficult clearing procedures often result in routine clearing customs delays. However, Mongolian suppliers have had direct experience with shipping fresh-slaughtered product to this country. Attempts to analyze that experience

and build on it should be considered essential to expanding exports to Jordan. (Source: http: //www.state/ www/issues/economic/trade_reports/neareast.)

SECTION FOUR: DEMAND DETAILS OF SELECTED ECONOMIES

It has been the expectation of the Mongolian Meat Industry and Mongolian policy-makers to eventually sell meat into the major developed economies. They have spent time and money on making modernizing plant improvements and sanitary upgrades. Someday this goal might be realized; however, in the meantime, the large cattle herd, the overgrazed mountain pastures, the under-utilized meat processing capacity, and the need for advancement in a transitional economy demand immediate response. What must be done is to expand meat exports as quickly as possible. To accomplish this, we must expand and broaden trade to the traditional Eastern Siberian customers and additionally, look beyond those desired developed countries.

In the developed counties, there seems to have been a structural shift in the demand for red meats. Because of health concerns, the fat in red meat is being replaced with the fat of fish and poultry products. Additionally, because of fat concerns, tinned meat demand in the USA has plummeted over the past decade. In economic theory, what is occurring is that meat as a normal good will increase its demand as incomes rise, but if meat becomes an inferior good the demand declines as incomes rise. What we are seeing in the developed economies is red meat becoming an inferior good in terms of economic behavior of consumers.

The economies in which there are meat-eating consumers, but which lack the comparative advantage of growing their own adequate supply of livestock are the nations[3] of East Asia, the nations of the Middle-East, the non-EC nations of Eastern Europe, and the Newly Independent States from the former USSR. This phenomenon of “meat becoming an inferior good” has not affected the demand in our newly targeted economies. In fact, the opposite is occurring, as their incomes rise, the demand for red meat and meat products increases. It has been pointed out that the USDA’s Commodity Credit Corporation’s Food Aid program for Russia might have a negative impact on the demand for Mongolian meats. The latest invitation is for 13,000 tons of pork shoulders and 5,000 tons of pork trimmings to be delivered to USDA by the end of June 1999. In the author’s opinion, this will have some impact, but since Mongolia is a beef suppler, this event will have limited impact on the demand in Russia.

[3] East Asia—Malaysia, Indonesia, Viet Nam, Philippines, South Korea, Singapore, Hong Kong, Taiwan, etc. Middle East—Turkey, Egypt, Iran, Jordan, Saudi Arabia, United Emirates, Yemen, Kuwait, etc. Non-EC—Poland, Bulgaria, Macedonia, Albania, Romania, Croatia, Slovakia, Slovene, Serbia, etc. NIS—Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan Belarus, Baltics, etc.

The data below attempts to illustrate the demand levels for the various categories of meat products under discussion with the nations mentioned. Some countries per-capita demand information was not available, so the author shows only the population as an indicator of potential demand levels.

MEAT CONSUMPTION IN SELECTED COUNTRIES, 1997

in Tons

Based on per-capita X population, where available

	Population	Beef		Lamb
	In millions	Veal	Pork	Mutton
Bahrain	595	N/A	N/A	N/A
China	1,236,260	533,839	4,225,761	545,078
Egypt	60,978	471,142	N/A	85,923
Hong Kong	6,660	6,813	369,932	N/A
Indonesia	206,338	N/A	N/A	N/A
Japan	116,283	1,469,451	2,077,869	63,141
Kazakhstan	16,319	N/A	N/A	N/A
Kuwait	1,811	N/A	N/A	N/A
Malaysia	21,400	N/A	N/A	N/A
Oman	2,382	N/A	N/A	N/A
Philippines	72,944	255,304	951,588	N/A
South Korea	45,554	447,256	875,876	N/A
Saudi Arabia	20,181	77,054	N/A	258,683
Singapore	3,472	22,278	109,336	N/A
Taiwan	20,000	70,000	765,454	N/A
Thailand	60,300	N/A	N/A	N/A
Turkey	64,479	27,204	N/A	381,012
United Arab Emirates	2,353	N/A	N/A	N/A
Viet Nam	77,562	N/A	N/A	N/A
Yemen	16,887	N/A	N/A	N/A

Source: USDA and AMI per-capita data where available. Population data derived from internet sources

Note Tables Four, Five, Six, Seven, and Eight. They indicate the amount of imported meat products[4] for many of the nations identified above.

They cover all subsets of Beef and Veal (all), Beef and Veal Chilled, Beef and Veal Prepared, Beef Variety Meats Fresh Canned and Prepared, Beef and Veal

[4] These figures have been derived from the export data published by the USA Commerce Department. Hence, these are not the total imports of each nation, but only the minimum amount, since they might import from other nations.

Frozen, Other Meat Products except Pork and Beef Type Casings, Lamb and Mutton, and Sausage and Bologna.

The effect of the Asian crisis shows up in the fact that, upon examination of the data, imports to those countries in that region have declined since 1997. However, all forecast indications point to a rebounding from the trough of the business cycle in most of those economies. This offers an excellent opportunity for Mongolia to *actively market* meat products in those regions.

They will be searching for suppliers to handle the growing demand of their consumers. The same holds true for the mid-eastern nations, except that the decline has been caused by low crude oil prices. Again, this low price phenomenon is passing; those nations should be increasing their meat imports soon.

Table Four

IMPORTS OF SPECIFIED ECONOMIES

in Tons

Beef and Veal (all)

Fresh, Canned and Preserved	**1996**	**1997**	**1998**	**Value/1998**	
				USD/Ton	
China	394	1156	1832	2288	
Egypt	176	688	2228	3220	
Hong Kong	11773	9373	11770	2925	
Indonesia	1006	1101	208	5783	
Japan	336796	345946	388703	3350	
Jordan	187	171	16	8250	
Korea, Rep	70617	89729	53457	2661	
Kuwait	397	523	688	4189	
Malaysia	203	207	303	4881	
Palau	92	174	134	3080	
Philippines	551	1093	335	5379	
Poland	314	2239	313	2166	
Russia	3883	7756	7143	1448	
Saudi Arabia	1166	963	778	4399	
Singapore	751	720	694	5817	
Slovenia	118	0	0	8220	**1996
Taiwan	9643	10686	7297	3853	
Thailand	185	554	225	2871	
Turkey	94	71	195	1721	
United Arab Emirates	562	628	626	4528	
1/ROW	1838	3153	5552	2225	
TOTAL	**440746**	**476931**	**482497**		

1/ US not included

Source:
US Dept of Commerce
Bureau of the
Census

Table Five

IMPORTS OF SPECIFIED ECONOMIES

in Tons/1

Beef and Veal Fresh Chilled

	1996	1997	1998	Value/1998 *USD/Ton*
Hong Kong	1236	780	539	2882
Japan	131633	141110	145247	4782
Russia	558	1070	1358	1159
Singapore	145	239	197	5817
South Korea	9114	6005	2558	2630
Taiwan	1104	1270	942	5421
1/ROW	1,409	3187	4426	3399
TOTAL	**145199**	**153661**	**155267**	

1/ Does not include USA

Beef and Veal Prepared

	1996	1997	1998	
Japan	3206	2580	2203	7078
Russia	1160	284	278	2435
Taiwan	351	80	46	3130
1/ROW	2,374	2315	2922	4454
TOTAL	**9087**	**7256**	**7447**	

1/ Does not include USA

Table Six

IMPORTS OF SPECIFIED ECONOMIES

in Tons

Beef Variety Meats

Fresh, Canned and Preserved	**1996**	**1997**	**1998**	**Value** *in USD/Ton*	
Bulgaria	44	149	774	895	
China	1624	1425	1237	1842	
Croatia	140	*	*	485	**1996
Estonia	693	92	758	1015	
Hong Kong	5926	10570	7081	2098	
Indonesia	10115	4242	383	948	
Japan	303	597	253	2709	
Korea, Rep	10588	5576	3969	1489	
Latvia	145	779	1864	994	
Malaysia	178	32	*	2468	**1997
Philippines	428	566	82	4963	
Poland	9250	6230	7010	1148	
Romania	371	595	838	781	
Russia	52145	55353	40573	953	
Saudi Arabia	896	477	812	1362	
Singapore	74	146	53	2981	
Taiwan	454	349	2503	2038	
1/ROW	216	1254	4755	888	
TOTALS	**93590**	**88432**	**72945**		

1/ US not included

Source:
US Dept of Commerce
Bureau of the Census

Table Seven

IMPORTS OF SPECIFIED ECONOMIES

in Tons/1

Other Meat Products, except Pork

	1996	1997	1998	VALUE *USD/Ton*
Japan	757	351	841	2766
Poland	870	373	153	935
Russia	751	9600	310	1332
Singapore	711	70	14	1429
1/ROW	10,122	12385	11251	2391
TOTAL	**13211**	**22779**	**12569**	

1/ Does not include USA

Other Meat Products, Prepared

	1996	1997	1998	
Indonesia	4180	9436	619	3150
Japan	734	677	3007	1038
Russia	929	388	2	3500
1/ROW	5,592	5850	10410	3892
TOTAL	**13431**	**18348**	**16036**	

1/ Does not include USA

Beef and Veal Frozen

	1996	1997	1998	
China	340	1065	1384	2315
Hong Kong	10429	8436	11159	2832
Indonesia	959	461	182	6187
Japan	201967	200257	221252	2676
Jordan	177	161	10	10,200
Kuwait	370	466	624	3825
Malaysia	202	171	213	5545
Philippines	387	904	307	5368
Poland	184	2168	312	2141
Russia	2166	6409	5509	1469
Saudi Arabia	965	829	596	3872
Singapore	523	420	478	5669
South Korea	61343	83241	50324	2653
Taiwan	8188	9335	6309	3624
Thailand	182	487	208	2447
United Arab Emirates	506	538	500	4724
1/ROW	2869	1506	1352	1643
TOTAL	**291757**	**316854**	**300719**	

1/ Does not include USA

Table Eight

IMPORTS OF SPECIFIED ECONOMIES

in Tons/1

Beef Type Casings

	1996	1997	1998	VALUE *USD/Ton*	
China	191	165	176	1091	
Croatia	48	*	*	1375	**1996
Japan	114	120	68	1706	
Korea, Rep	41	1	3	7667	
Poland	56	*	*	6892	*1996
Turkey	8	17	7	11286	
1/ROW	35	221	388	5655	
TOTAL	**493**	**524**	**642**		

1/ Does not include USA

Lamb & Mutton

	1996	1997	1998	
Bahrain	21	0	0	905
Japan	106	51	64	5046
Russia	66	166	152	2447
Singapore	26	3	4	6000
Taiwan	23	15	12	5167
1/ROW	104	195	464	3787
TOTAL	**346**	**430**	**696**	

1/ Does not include USA

Sausages and Bologna

Hong Kong	1220	5827	8625	1392
Japan	9134	11989	13628	3075
Latvia	366	2687	3197	1123
Philippines	774	610	436	2855
Russia	54900	71191	45334	1394
Saudi Arabia	347	485	511	2405
South Korea	3644	4255	1933	1920
Taiwan	332	223	192	2771
Tonga	237	316	221	1457
1/ROW	2244	8762	8918	1748
TOTAL	**73198**	**106345**	**82995**	

1/ Does not include USA

For additional analysis we refer to Tables Nine and Ten, The World Beef and Veal Summary, covering the Production, the Imports, the Exports, and the Consumption levels of selected economies over the period of 1994, 1995, 1996, estimated 1998, and projected 1999. This information has been derived from the records of the US Export Federation and is designed to help US exporters target their markets of interest. Observe that exports seem to grow with the growing of consumption, while production and imports seem rather steady. This suggests that if the economic growth in a targeted nation grows, so will its imports of meat and food increase.

Table Nine

WORLD BEEF AND VEAL SUMMARY

Production & Imports

Production

	1994	1995	1996	1997	(p)1998	(f)1999
United States	11194	11585	11749	11714	11804	11638
Canada	903	928	998	1075	1170	1135
Mexico	1810	1850	1800	1795	1810	1800
Argentina	2600	2600	2580	2975	2570	2650
Brazil	5730	6080	6150	6050	6140	6106
Columbia	566	604	650	680	690	702
European Union	7753	7860	7789	7757	7486	7361
Poland	405	400	396	404	416	405
Russian Federation	3240	2734	2570	2326	2090	1900
South Africa	581	542	525	591	676	673
India	1025	1100	925	1430	1593	1645
China	3270	4154	3557	4150	4482	4706
Japan	602	601	555	530	530	525
Australia	1829	1717	1736	1942	1996	1900
New Zealand	566	630	631	664	620	619
ROW	5209	4839	4869	4699	4726	4623
	47283	**48224**	**47480**	**48782**	**48799**	**48388**

Imports

	1994	1995	1996	1997	(p)1998	(f)1999
United States	1075	954	940	1063	1198	1227
Canada	286	256	237	252	240	230
Mexico	90	42	82	148	197	208
Brazil	88	124	144	113	90	70
European Union	426	374	365	384	331	352
Poland	18	8	23	7	2	5
Russian Federation	541	612	680	620	430	400
Egypt	153	120	110	140	80	70
South Africa	83	66	60	60	58	59
Taiwan	62	66	59	75	73	74
Hong Kong	74	63	57	50	60	61
Japan	842	927	899	924	957	978
South Korea	165	194	191	199	107	180
ROW	216	265	264	298	304	305
	4119	**4071**	**4111**	**4333**	**4127**	**4219**

Source: Consular and Attaché reports, official statistics, and results of office research

(p) preliminary

(f) forecast

Table Ten

WORLD BEEF AND VEAL SUMMARY

Exports & Consumption

Exports

	1994	1995	1996	1997	(p)1998	(f)1999
United States	731	826	851	969	985	1080
Canada	220	219	286	360	405	425
Argentina	376	520	470	437	280	350
Brazil	383	291	274	290	335	420
Uruguay	152	143	210	268	255	235
European Union	1084	936	913	903	744	715
India	130	140	150	158	162	170
China	74	95	79	36	66	50
Australia	1168	1092	1016	1147	1223	1160
New Zealand	466	504	515	531	519	496
ROW	338	377	349	255	257	204
	5122	**5143**	**5113**	**5354**	**5231**	**5305**

Consumption

	1994	1995	1996	1997	(p)1998	(f)1999
United States	11528	11726	11903	11767	12051	11795
Canada	962	971	951	967	1006	942
Mexico	1899	1890	1880	1938	2004	2005
Argentina	2230	2080	2120	2555	2295	2330
Brazil	5415	5903	6060	5883	5895	5756
Colombia	558	598	649	678	686	703
European Union	7467	7391	6870	7022	7119	7145
Poland	409	393	395	361	345	385
Russian Federation	3791	3402	3188	2967	2554	2335
Egypt	540	517	536	566	520	530
South Africa	662	606	583	648	731	729
India	895	960	775	1272	1431	1475
China	3199	4062	3481	4117	4421	4661
Japan	1446	1518	1438	1467	1485	1505
Australia	669	650	715	780	760	750
ROW	5045	4653	4558	4550	4496	4506
	46715	**47320**	**46102**	**47538**	**47799**	**47552**

Source: Consular and Attaché reports, official statistics, and results of office research USMEF
(p) preliminary
(f) forecast

SECTION FIVE: CONCLUSIONS AND ACTION RECOMMENDATIONS

Conclusions

In summation, we determine the following aggregate information about the Mongolian meat export market:

- Expanding exports of frozen beef carcasses to the current and expanded Russian customers (Eastern Siberia) will produce immediate positive results.
- Finding ways to increase value-added exports to the 10+ million Eastern Siberian consumers would give the Mongolian economy a big boost.
- Because of some modern facilities and an abundant supply of (high quality) manufacturing beef, a foreign investor should be located. They could be offered an opportunity to set up a fast food manufacturing-supply operation (McDonald's, Burger King, etc.) to service China and other nearby points. Letters concerning interest from these organizations are attached in Annex HH.
- A special program, implemented by Mongolian embassies, of identifying potential meat buyers in the Middle East, East Asia, and Eastern Europe would be an excellent addition to the market information system.
- Promotion of "aggressive marketing" programs (*implemented by a special export czar selected by Prime Minister)* in the above economies would enhance potential sales of value-added meat items. Such countries as, in the Mid-East: Turkey, Jordan, Iran, Saudi Arabia, Kuwait, Egypt, United Emirates, etc. In Southeast Asia: Philippines, Viet Nam, Malaysia, Laos, Singapore, South Korea, etc. In Eastern Europe: Bulgaria, Romania, Slovakia, Macedonia, Croatia, Slovenia, Albania, etc.
- A more open and competitive (expanding price efficiency) market for exporting would benefit the Mongolian economy, creating a fair and level playing field for all Mongolian exporters.

CONCLUSIONS

- **Expanding exports to Eastern Siberia will produce immediate positive results.**
- **Increasing value-added exports will boost the Mongolian economy.**
- **A foreign investor should be identified and offered the opportunity to set up a fast food supply operation (Burger King/McDonalds).**
- **Identifying potential meat buyers by Embassy personnel would be an excellent addition to the MIS.**
- **Implementation of aggressive marketing program by special "Export Czar."**
- **Create a fair and level playing field for all Mongolian exporters ("dinosaurs and gazelles").**
- **Autonomous quasi-government association preferable to current ineffective private structure.**
- **Need to facilitate 20-40 ton export transactions.**
- **Shortage of working capital caused by awkwardness of turning barter transactions into cash restricts additional exports.**
- **Lubricated timber trades to China to facilitate expanded meat transactions would be a tremendous step forward.**
- **Plant modernizations and sanitary upgrades may not produce desired results.**
- **Creating animal disease-free zones will enhance value of Mongolian livestock inventory.**
- **Open and competitive livestock-purchasing regime will benefit livestock sector.**
- **More efficient use of factors of production will be realized by adding feeding facilities, thereby extending slaughter period beyond 100 days.**

- The current Export Association structure is not as effective as needed; therefore, a new framework for an autonomous quasi-government Mongolian institution is desirable.
- Past and current practices effectively limit transactions to a minimum size of 135 tons; this is a major constraint of expansion. Transactions of 20-40 tons must be facilitated.
- Collection of payments from Siberia and turning payment-in-kind barter transactions (oil products and timber) into cash has many difficulties and is restricting additional exports, causing working capital shortages.
- Finding ways to pierce the Chinese protectionist veil on meat imports would be an enormous step forward. Timber trades to China must be lubricated to facilitate expanding meat transactions. See Appendix H.
- Because countries maintain an impenetrable veil of protectionism, plant modernizations and sanitary upgrades may not produce meat exports to the developed countries any time soon
- Additional national veterinary programs to prevent and control Foot and Mouth disease (FMD), Rinderpest, Hog Cholera, Swine Vesicular Disease (SVD), African Swine Fever (ASF), Exotic Newcastle Disease (END), Contagious Equine Metritis, Bovine Spongiform Encephalopathy (BSE), African Horse Sickness, Brucellosis and other animal diseases would enhance export possibilities by creating certified free zones. This might open USA market. See Annex GG for application information.
- A more open and competitive livestock-purchasing regime would benefit the livestock sector by allowing the export benefits to be passed back to herders.
- Extending the slaughter period would make more efficient use of factors of production. See Annex FF for Russian feeding model information.

These conclusions were based on my interviews spelled out in the Appendices A through I. See Table 11 for a concise view of the Mongolian Export Industry.

Table Eleven

MAJOR MEAT PROCESSOR FIRMS

in Mongolian Exports

	YEAR ESTAB	KGS/SHIFT CAPACITY	GOVERNMENT OWNERSHIP	EXPORTED LAST YEAR	
1/MAKHIMPEX ***See Appendix D***	1974	120,000	51%	2,000	
1/DARKHAN	1970	50,000	51%	0	
3/TEGSH ZAVKLAN	1989	5,000		0	
2/DORNYN GOBI ***See Appendix D***	1986	55,000		4,020	Merged with Dornot
2/BAGAkKHANGAI ***See Appendix A***	1995	30,000	100%	1000	
3/MONGON ALTAI	1995	5,000		135	
2/EVIIN HUCH ***See Appendix G***	1992	15,000		1,052.70	
3/RAZHO IMPERS	1996	5,000	100%	0	
2/UPA TRADE CO LTD	1999	5,000		**NEW FIRM**	
TOTALS		**290,000**		**8,208**	

1/ Due to lack of capital, virtually out of business
2/ Considered very aggressive toward export business
3/ Considered by Industry sources a non-contender for increasing exporting

RECOMMENDED POLICY DEBATE AND ACTIONS

The policy debate and resultant action that is needed to correct or enhance the situation as outlined above should be taken in stages. The first stage will address some of the issues in the short-run, while stage two actions will deal with the long-run issues.

Stage-One Actions (short-term)

ACTIVIST VS. PASSIVE MARKETING APPROACH

RECOMMENDED ACTIONS

- **Activist vs. Passive marketing approach**
- **An autonomous quasi-government exporting association**
- **Identify major ground beef patty user**
- **Create animal disease-free zones**
- **Extend slaughter period beyond 100 days**

Mongolia needs to enter into a new "activist" approach of marketing Mongolian meat products to the world market. No longer can they rely on the "passive" approach of waiting for someone to come to the door and ask, "Do you have meat to sell?" This should be a coordinated function of marketing, spearheaded by the government. In the USA, the embassies located in the many different countries of the world serve as a marketing arm for USA products. Commercial Attachés in American Embassies see one of their most important jobs as seeking out and identifying potential buyers in the foreign land they are stationed in and publicizing the list back to USA (public information to any interested party) suppliers. This is at very little cost, as the individual at the Embassy is already doing some other diplomatic function. However, this may require the selection of an individual[5] in the Ministry to coordinate the embassy personnel stationed around the world. It might require some training and special instruction to those embassy personnel to learn how to seek out and identify potential meat-buying organizations in each foreign land in question.

The USA model has evolved to a very effective and efficient marketing assistance to the USA supplier. The embassy can also go further and set up trade fairs, then invite the local buyers and the Mongolian suppliers to travel to the country and show their products. This could be a very effective tool in breaking into the various markets (Mid-East, Southeastern Asia, Non-EC, and Former USSR NIS), discussed in this paper. In the USA case, the embassy also can assist in the setting up of the financial aspects of the transactions. They are familiar with the local foreign banks and can help facilitate (put together) "letters of credit" between the private parties in the transactions.

FRAMEWORK FOR A NEW MONGOLIAN EXPORTING INSTITUTION

The next action step is a little more complicated. The need for a new Mongolian autonomous institution to service the needs of Mongolian exporters has been discussed in this paper. The access to information must be opened up to all levels of exporting participants in order to expose a competitive environment to the trading regime. If the goal is to penetrate past the monopolist Russian buyers at the border in order to sell value-added Mongolian meat, you will need a more

[5] In the USA case, it is not unusual for the President to select an individual to be responsible for implementing a particular important policy initiative. The selection of a Drug Czar is an example of such an approach. This czar has authority to coordinate the policy between various departments within the government. Perhaps the appointment of an Agriculture Export Czar for the Mongolian economy might help implement the suggested actions of this report.

aggressive Mongolian trader. To draw this type of trader, we must have an institution that is transparent and not susceptible to the wishes of the large less flexible traders.

This framework for an organization can be a simple, centrally located office with only a staff of two, with the appropriate office equipment (desks, telephone, two computers, fax, printer and scanner). However, for the institution to have credibility, they must be a quasi-government operation. In other words, they should have the authority from the Ministry to issue a license for exporting. The funding level for a startup operation is very low (see detailed budget in Annex EE). If the institution would service the exporter members by 1) collecting and disseminating the statistics of market information such as local price conditions for livestock, export sales activity, market conditions of demand potential in export markets, macro-economic world market conditions, export procedural information, and 2) act as a clearinghouse function for barter trade of commodities, etc., these services certainly would provide value for the membership.

Moreover, the office staff can design many other specialized services on a for-a-fee basis such as a) filling out complicated export documentation; b) providing a transportation information network (rail/truck) for less than 135-ton transactions (i.e., 20-40 ton shipments); and c) acting as modern technology transfer agents, etc. A yearly membership fee from each of the five to nine licensed, large-member firms, after a period of time, would not be an unreasonable assumption. After a while, when members gain confidence, a sliding membership fee schedule can be developed based on the performance of the institution to each member organization.

This organization might also include the livestock sector. They might provide livestock quantities and locations to the office, to be disseminated directly to packer-buyers. This would save the packer-buyers the job of seeking out the location and sellers of animals. This would also open the process of competitive bidding for livestock instead of the monopsonist regime currently in place. The report discusses the issue and benefits of creating a buying station environment (see Annex DD for model).

Once this operation is functioning, a second level can be imagined. The institution can have 1) a central laboratory facility for use of the members. It is possible to develop to the stage where major trading countries station their inspector there so export certificates could be signed. This could dramatically cut the costs of exporting. And, additionally, 2) visualize the institution has classroom facilities for training of Mongolian exporters in procedure, technology, etc. The staff might 3) invite foreign speakers from potential customer countries to explain their special requirements. The possibilities are endless. Nevertheless, the first step is to agree to set up the framework for such a quasi-government Mongolian institution.

IDENTIFY MAJOR GROUND BEEF PATTY USER

The ministry or some other appropriate agent should immediately search out the different fast food organizations operating in this part of the world. Then they should inquire at the highest levels of those organizations if the demand and the requirements needed for a new major ground beef supplier exists. Such factors as cost structure, QA programs, HACCP, transportation means, and costs or import/export agreements, etc. will be important to start a project discussion with these large chains. In my experience, the Burger-King organization of Poland was anxious to find such a supplier in Eastern Europe. Possibly, the same demands may be being sought for this part of the world. Again, the plant I visited in the remote location, 100 kilometers from Ulan Bator (Bagakhangai), would be a possible candidate, after installation of the special equipment for ground beef patty production. I am, however, concerned about the inferior infrastructure of roads at that location. See Annex HH for letters from two large firms that can buy at a minimum, 15 million kgs annually of beef patties for export to the economies outlined in this document.

Stage-Two Actions (Long-term)

ANIMAL DISEASE-FREE ZONES

Livestock diseases like Foot and Mouth disease (FMD), Rinderpest, Hog Cholera, Swine Vesicular Disease (SVD), African Swine Fever (ASF), Exotic Newcastle Disease (END), Contagious Equine Metritis, Bovine Spongiform Encephalopathy (BSE), African Horse Sickness, Brucellosis, and other animal diseases, etc. are considered dangerous to livestock interests in the west. Certified free zones would raise the sanitive level of the Mongolian livestock industry in the eyes of the world market. At this time, it does not seem that important; however, disease-free zones would be the centerpiece of the Mongolian meat image around the world. I am suggesting that the Ministry investigate the issue to find out the specific procedures for USDA and other major meat trading countries, then work on implementing those requirements.

This is a process that would take years to successfully complete. This would be an investment that in future years would increase the value of the Mongolian Livestock Industry. See Annex GG for USDA application information.

EXTENDING THE SLAUGHTER PERIOD BEYOND 120 DAYS

The fact that Mongolia currently only uses its factors of production for 120 days in the year, less than one third of the time, has a huge negative effect on the fixed cost-per-unit produced. It is imperative that a way be developed to extend the period of usage. My discussion with many members of the Mongolian export industry reveals that the problem rests within the fact that animals are all fattened by grazing, and the harsh Winter climate makes it impossible for them to be fattened enough for slaughter during most months of the year. Once the packer procures the quantity of "slaughter-ready" animals for the 15 July to 15

November time frame, there are no more animals fattened to extend slaughtering past that period.

What if the packer obtained less-fattened animals at the beginning of the period, put them in a feedlot near the facility, and fattened them during the 15 July to 15 November time frame, using grains? This would result in additional animals being ready to slaughter after the grass-fed supply had been slaughtered. Mongolia does have some crop producing regions. One of the firms I interviewed (see Appendix G) is currently growing grains to feed their hog raising facility. They have 6,000 ha of wheat and 600 ha of yellow bean (soy) under cultivation.

We cannot reproduce the conditions of Kansas or Nebraska in Mongolia, so feeding formulations used in the USA are not possible. However, I have worked in Lotoshino, Russia on a 10,000-cattle feeding operation. They also do not have Kansas or Nebraska conditions. I have included (see Annex FF) their feeding regime for the information of the livestock industry. Maybe this can be adjusted to a Mongolia-specific feeding regime.

Appendix A

Interview with Dashkhun Gerelkhuu, General Director, Meat Processing Factory of Bagakhangai

Tuesday May 25 1999

Bagakhangai Meat Processing factory (herein after refereed to as "BMF"), is designed for slaughtering and producing frozen beef carcasses for export only. The by-products and hides (skins) are sold to Chinese traders. No domestic business is being done. The plant is selling 1,000 tons of carcasses (40 percent of capacity) to two major export points in nearby Russian cities, in particular Irkutsk and Ulan-Ude[6]. The distance to these locations is approximately 1,000 kilometers from the plant, which is located in a remote location 100 kilometers from Ulaanbaatar. Shipments are made in refrigerated rail cars holding 135 tons each, as no trucks could negotiate the 30 or 40 miles of dirt trails leading to the plant. Additionally, there is no rail spur to the plant, so product must get to the rail car, about a three-mile distance from the plant doors. The cost of shipment of a rail car to the Russian border (450 kilometers) is about $2000 USD. There is, however, an abandoned Russian airstrip nearby, if air shipments are needed.

The general director stated he is not familiar or concerned with Russian customs or tariff requirements since he sells delivered FOB border, and the buyers are responsible after that point. The level of selling price compared to the level of his costs is in line, and he confirmed that BMF could make an acceptable profit margin at this time.

He stated that there is a plentiful supply of live animals and that his constraint is working capital to fund additional sales. He could increase his sales to 2500 tons under the right conditions. Assuming working capital was not his restraint, he could increase sales to 1500 tons immediately. However, he would need a capital expenditure of $300,000 USD to expand his freezer capacity to get the sales to 2500 tons. There are no doubt problems with collections since the Russian financial crisis appeared last year, but using his skills and some barter trading allows him to consider payment not the major constraint to expanding export sales.

Based on his "Business Plan," the sales to 1500 tons by 1999 (48.1 percent of capacity) can not be met, because of the lack of reasonably priced working capital. All other issues are being addressed, such as training of employees, repairs of the plant facilities, and the completion of the on-site laboratory function.

I personally toured the facilities and was greatly impressed at the level of technology installed. Equipment for added-value production was evident and some is never used. However, the level of Russian buyers that this facility is dealing with has no interest in added-value goods. They are most likely

[6] Based on unofficial estimates, these two cities represent a total annual demand for 25,000 tons of frozen beef carcasses. They also display a preference for the taste of Mongolian beef. This exporting offers an excellent opportunity for the rural Mongolian cattle producer and a reliable market for his animals, thereby raising the overall well-being of the rural sector.

producers of these goods themselves and have no interest in buying competitive products from Mongolia. Production of value-added goods for the domestic market is the intended use of these assets, but no domestic market exists especially in this remote location.

Surprisingly, this facility, from a sanitation and structural level, seems to be near world standards. There are thousands of marginal improvements that would be required on the building. The outside infrastructure and environmental issues might be the major concern of inspectors.

Appendix B

Interview With
Mr. D. Gerel, Deputy Director,
Meat Processing Combinat
Makhimpex
Wednesday May 26 1999

I could not met with the General Director, Mr. H. BATTULA. However, I did read an interview he gave to a newspaper and was greatly impressed by his aggressive thinking.

Makhimpex Company has four fundamental plants and other manufacturing shops:

- Slaughtering and refrigerating plant (it has a large storage capacity of 16,000 tons of meat products at one time)
- Sausage and canned meat plant (canning may be idle)
- Casing plant
- Meat processing and butchering plant

The company has its own livestock collection sites in 13 airmaks of Mongolia. They transport the animals to the plant using their own trucks.

They have a sheep-breeding farm with 50,000 head. In the near future, they plan to supply 20percent for their own needs from this operation. Additionally, the company has a “Daughter” Sojo company that breeds pigs. The firm has been recently privatized, with 49 percent private ownership.

Makhimpex Company collaborates with many varied domestic farms and organizations and different foreign companies from Russia, China, Germany, Netherlands, France, Swiss, Italy, and Japan. According to the director, the company has good friendships, cooperation, successful trade, and economic benefits with these collaborations. Based on customer needs, the company can supply cuts of lamb and beef meats, bone-in or boneless, in a chilled state or frozen form. The are also capable of producing horse cuts for export to Japan.

The slaughter house productive capacity is as follows:

Slaughtering and dressing of animals:

- Sheep and goats, 8000 heads/day
- Cattle and Horses, 800 heads/day
- Pigs, 300 heads/day

Refrigeration:

- Meat and edible viscera, 600 tons/day
- 24 freezers with a capacity of 340 tons meat and edible viscera
- Storage with a capacity of 16,000 tons

Meat Processing:

- Canning processing plant produces 1.5 million pieces of 10 assortments, however, their supplier of tin requires hard currency in advance and they have been forced to shut-down canning
- Sausage plant produces 5,700 tons/year in 30 assortments
- Butchering shop (deboning) has capacity of 18-20 tons/day
- Together meat processing and butchering plant have capacity of 40 tons of meat/day

This facility was in poor condition and could never pass any western standards. Equipment was old and worn. Even the boning tabletops were worn-out wood. The plant on the day of my visit was mostly idle. The sausage department was boning some pork carcasses. This was about one ton of production for the day. I saw at least 25-50 workers milling around. I asked if one ton of production would pay for the labor I saw, but never got an answer. During the peak production time, 15 July to 15 November, they have 1600 employees.

Exporting is done from this facility. In 1998, they shipped 2,000 tons of beef carcasses to Russia. Payment is very slow. The director says that barter is too much trouble. If they take oil product for payment-in-kind, they sell the oil to a state electric power plant. They do not pay the bill and the director is short of working capital. If they take timber, the transaction is cumbersome and takes too long to be paid, so he would rather not get involved. He wished that some sort of exchange facility was in operation so he could make sales and trade, the payment-in-kind to be paid out in a reasonable length of time.

He stated their “Daughter” company, Sojo pig breeders, is having financial trouble and needs cash to continue pig-feeding operations. He expects to start tinning meat soon and wants to export to South Korea and to Russia starting next season.

Appendix C

Interview with
Tserenbatyn Bat-Erdene and Mr. Batsuur,
Officer's Strategic Planning & Unified Policy Department,
Ministry of Agriculture & Industry
Wednesday May 26 1999

The officer stated that the Ministry fully supports any attempts to increase exports of Mongolian meat commodities. They have licensed for exporting nine Mongolian Meat Processors.

They explained what they term the "exporting cycle of production," namely; those firms collect livestock during April to August. Then the firms slaughter until November. They freeze and hold the meat until it is marketed starting in January the following year.

They went on to explain that after the breakup of the Former Soviet Union (USSR), the ministry no longer directed the activities concerning exports, inputs and/or outputs of the Mongolian meat industry. As can be seen on page 216 of the Mongolian Statistical Yearbook, meat exports plummeted during the early 1990s. Since the mid 1990s some recovery is occurring. The outlook is not improving, as 1998 exports are somewhat better than 1997, and based on my projections, 1999 looks about 5 percent lower.

They have tried to coordinate activities in the sector but do not have resources available to do much. However, they have coordinated some grant programs from donor nations for equipment and some upgrades and repairs to plant facilities. They have not been able to supply any soft loans[7] as firms need working capital to expand exporting transactions. They have also been in contact with their neighboring government counterparts about exporting meat. Russian officials are anxious to import meat products, but the financial crisis in Russia has caused efforts to be reduced, while China to the south has not indicated any desire to import fresh or frozen meat from Mongolia.

It seems that the Inner Mongolian region of China has a similar livestock production environment, and Chinese policy is currently protecting those producers at the expense of the Chinese consumer.

Conversation about exporting horsemeat to Japan has also been limited by the economic slowdown in the region. Mongolia has shipped fresh lamb carcasses to Middle East regions with success; however, they do not know how to expand this activity. I suggest that reliance on Russia as the main source of exports is also dangerous. At any politically expedient time, the Russian Dumas might take on protectionist policies to protect the Russian agricultural sector. However, this may be true, but feeling is that the Russian Dumas would target protectionist policy and rule out Mongolian products from protection.

[7] Loan given at lower than market rates and has liberal amortization schedule.

It seems to the author that they are practicing what I term “passive marketing.” In other words, they are waiting for someone to come knocking at the door to express interest in buying Mongolian meat products. I suggested an “aggressive marketing” approach—an activist policy to diversify exports. Consistent with a free market approach, government can assist in the marketing activity of promoting their products anywhere in the world. They stated that marketing is not within the policy-making function that they now work under. I suggested they reconsider that policy, as even the U.S. government engages in programs that promote and market U. S. products abroad and transmit back to all interested U.S. Firms the information.

I suggested, to their delight, that since they have embassy personnel in many countries that may not have trade barriers such as Western Europe has, but who could be interested in the fresh, frozen, and tinned spring lamb, standard lamb, mutton, and beef products available from Mongolia, a program wherein their embassy staffs in these locations[8] would identify local buyers and forward their names and/or interest back to the firms in Mongolia (both state-owned and private) for direct contact.

They seemed to like the idea since it did not require new additional resources. They asked if USAID could be able to assist in the development and implementation of such a policy for the Ministry’s consideration. Moreover, would USAID contact the Ministry about this matter?

[8] In the Mideast: Turkey, Jordan, Iran, Saudi Arabia, Kuwait, Egypt, etc. In Southeast Asia: Philippines, Viet Nam, Malaysia, Laos, Pakistan, India, etc.

Appendix D

Interview with
Borkhuu Delgersaikhan, General Director,
Dornyn Gobi Co. Ltd.
Thursday May 27 1999

The general director pointed out that there is a huge demand for Mongolian meat products in Eastern Siberian Cities (population +10 million), while at the same time, the Mongolian meat processing industry has a huge capacity for slaughtering and producing carcass beef (60,000 tons). Additionally, there is an official estimated 32 million head and an unofficial estimate of 35-40 million head of live animals in Mongolia. Considering these facts, there is discussion that the Ministry would license the shipment of live animals (terminated in 1990) to Eastern Siberia. Mongolian meat processors “as a group” reject this idea and strongly oppose such a move.

The director sees the Eastern Siberian market with its +10 million population (see Table Eleven) as a long-term consumer of Mongolian meat products. There is a long history, going back to the USSR era, during which this region received huge quantities of Mongolian meat. In his view, there is no possibility that the Russian Dumas would target Mongolian product for protectionist exclusion, as this region has no Russian livestock production of its own to fed its citizens. Actually, the total Russian Federation cattle supply of 30 million head is smaller then the Mongolian population, unofficially at 35-40 million head. He pointed out that some Mongolian firms have failed because they were located too far from the supply and/or to far from the rail facility to ship product to the north. He is satisfied with the status quo and sees no reason to try to diversify exports. Last year they exported 3900 tons to Russian customers in Siberia. They have a long-term goal to expand to 10,000 tons per year.

The major production of this firm is 80 percent beef and 20 percent horsemeat. All beef is exported, while some production of mutton is targeted for the domestic market. There have been some test shipments of lamb to Russia, but they have generally not been well accepted. There was a group from Jordan who purchased 10,000 lambs and contracted with the firm to slaughter them and dress out the animals without refrigeration. These carcasses where flown back to Jordan. No second test has been asked for yet.

The major constraint of trade is the collection of funds due upon delivery. However, barter trading has helped induce trade but this has its limitations. All by-products are sold to Russians, but for quick cash, local Chinese traders stand by to purchase hides and offal that are produced. The firm has some bank loans and credits on the books; therefore, they do not find working capital to buy livestock as a major constraint of trade.

From a sanitation standpoint, he feels that the veterinary service in place during the socialist era has now been decimated. Any assistance that brings the Mongolian facilities and procedures closer to USDA, EC, and ISO9000 status

would be highly beneficial. They also need to constantly upgrade equipment and applied product manufacturing technologies. Veterinary services to livestock producers is also in need of improvement, and assistance in this area would greatly benefit the meat processing industry.

Appendix E

Interview with
Mr. Y. L. Bayaraahuu, General Consultant,
Mongolian Meat Processing Industry
Thursday May 27 1999

This gentleman's ideas of how to increase exports of Mongolian meat products are both practical and unique in nature. He sees the industry as a combination of dinosaurs and gazelles. The dinosaurs are allied to the older, state-owned and influenced firms that have little flexibility of action, while the younger, private-owned firms, the gazelles, can be very quick and innovative.

Currently, he describes the Mongolian meat processing industry as a seasonal activity. The plants are idle most of the year and work only about 100 days, usually between 15 July and 15 November. During most of the year, they have a limited staff on hand, usually 10 to 20 individuals for maintenance and security purposes. Basically, the typical plant has approximately 100 workers during the peak season, who they pay about 80-100,000 tug/month or about 100 USD. Slaughterers buy from 15 April to 15 July and slaughter to 15 November or so. They send out agents in early February to contact and deal with the herders. Because of the special holiday in February, the Lunar New Year, herders need supplies and have no cash. These agents provide cash and or flour and other supplies (plant the hook), so the herders can enjoy the holiday. However, the herder commits in advance to this packer agent his animal when the time comes. What is needed for the sake of the herder are selected organized *buying stations* set up in spring and again in summer, so the herder knows where and when packer purchasing is to occur. In the USA, these are called terminal auction markets and are located in livestock producing areas. See Annex DD for details on how to organize such a structure.

He mentioned that US food aid to Russia has had a short-term, chilling effect on the demand for Mongolian meat. Although the Russian government receives the food free, they are selling it at 700 USD/ton, about half the world price. Mr. Bayaraahuu was concerned if USA were planning to continue this program of food-aid to Russia.

The current export association does not work, according to Mr. Bayaraahuu. He reasons that the small, aggressive firms (the gazelles) want to distance themselves from their competitors. They like to participate in a group non-competitor arena, not, as it is currently, that the association office is located in a remote location at a large packer's office, their current business rival.

What is needed is a new autonomous institutional framework for the Mongolian Livestock and Meat Industry. The framework takes three stages of activity development, namely, a quasi-government operation, which works on behalf of all potential exporters or those directly, affected by exporting. For this organization to have credibility, it should be granted the authority to license firms for exporting. It should provide services to the live stock producers and meat

processors (market information[9], assistance with exporting procedures, i.e., filling out the forms, etc.), and should be centrally located. Secondly, it should organize itself to gather statistics important to its members. It should publish statistics on Mongolian supply matters, world meat market statistics, and individual country-of-interest demand statistics, and develop coordination of barter transactions.

The third stage might be too aggressive a suggestion, but let's try it: The association should set up a centralized laboratory for use by the members. It should arrange for its staffing by importing country inspection personnel, i.e. Russian and Chinese. The laboratory staff would be in a position to sign export certificates. This would have a huge impact on the costs of exporting. All the above services would allow smaller firms equal access to the exporting marketplace, thereby promoting a price efficient environment.

Additionally, this organization should develop a centralized transport information network. This could allow for the shipment of smaller quantities for export (i.e., 20- and 40-ton). Many gazelles feel they could substantially expand sales to the four major Eastern Siberian cites of Krasnoyarsk, Irkutsk, Novosibirsk, and Novokuznetsk, as well as increase current profit margins by 15 percent. They feel they have many buyers, at a level below the current Russian distributors, who could pay advance cash for meat products, but not in 135-ton quantities. In addition, many of these buyers are inclined to purchase value-added boneless product, rather then the more traditional carcasses. Finally, at some point in time they could have classroom facilities to offer training to the members on subjects of common interest. The staff might invite international specialist to offer assistance and information.

The organization can be built in small steps. First, we need only two employees to staff the office. This centrally located office needs only office furniture, two computers, fax, scanner, printer and telephone to be in business, in addition to the capital investment of the office and a possible payroll of $6,000 USD for two employees at $200 USD/month. The revenue could be a small $1,000 USD/year fee for the nine firms in the industry. If the association provides market information and export procedure assistance, this amount of payment seems feasible. The major step is for the Mongolian government to authorize the association to license for exporting. Fee-for-services may also generate revenue for this operation.

[9]This could cover a wide range of information. They could collect information on livestock offering by region, and members could find location of animals and bid on them without traveling all over the countryside; information and coordination on the markets for barter items such as timber; potential bids from China; current livestock and/or meat selling prices, current sales volumes; and prospects for export orders and inquiries, etc.

Appendix F

Interview with
Mr. Erdeubaatar, Mongolian Research Institute
and
Mr. Bayarsankhan, Mongolian Inspection Department
Ministry of Agriculture
Friday May 28 1999

The inspection service showed me the official records for 1998. They made out export certificates for 12 horses,13 tons; 22 Dogs; 36 Cats; 467 Cattle,1,500 tons; and 4448 tons of meats, totaling 5961 tons (not including dogs and cats). The official year book statistics show 7100 of meat exported. This yields a statistical error of 1139 tons. Mr. Bayarsankhan suspects that one of their interior points was used, as provinces can issue certificates also, and the shipment missed his department's recording. These exports are shown to be shipped to Russia, Japan, China, Jordan, and South Korea.

The department has 341 inspectors, 26 senior manager inspectors and 1 state general inspector. They operate in the plants and give direct veterinary supervision of production on each animal slaughtered.

According to Mr. Erdeubaatar, the state is providing free animal vaccines and insect washes to the herders. However, the local veterinary services are no longer state-owned. They are a private service for a fee. They follow guidelines set by the state but operate autonomously. New technology is dispensed to the state branches, who then pass it on to local privatized veterinary services.

He acknowledges a problem with Brucellosis and has not heard of any Hoof-and-Mouth outbreaks in Mongolia.

Appendix G

Interview with
Tsambajav Sarantsetseg, Deputy General Director,
Eviin Khucn Co. Ltd.
Thursday May 27 1999

This is a 100 percent private firm founded by Mr. BAYARSAIKHAN. The plant was established in 1996 with the help of a German company. The plant is in Bor-Ondor, 330 kilometers southeast of Ulan Bator. The plant is a modern, well-equipped facility. The equipment came from a German manufacturer, "Vogtwerke." The plant was designed by a German firm, "BC Berlin Engineering." The deputy director stated that by September they will have installed a modern de-boning line, also from same German manufacturer's equipment. Current capacity is 15,000 kg per shift. They have freezer storage to hold 300 tons of products. Their slaughter line can handle 80-100 head of cattle, 20 head of pig, and 300 head of sheep.

They have been exporting to Russia since 1993. They had no facilities then, so they contracted with the state-owned firms to slaughter and they sold up to 1,000 tons in Russian market. Last year they experimented and contracted with state-owned facility to de-bone cattle to sell boneless cuts in Russia. This was successful and is why they are installing, in September 1999, their own de-boning line. All their production has been shipped to Russia as follows: 1996, 161,900 tons carcass meat and 48,500 tons of by-products; 1997, 688,200 tons carcass meat and 219,000 tons of by-products, 1998, 940,000 tons of carcass meat.

They also are engaged in pig breeding. They currently breed 300 Chinese-type pigs, of which 20 are boars. They recently received 350 piglets. To support the feeding, they grow crops on 6,000 ha, where 300 tons of wheat were harvested and additionally now grow yellow beans (soybean) on a 600 ha leased plot in Gurvanbayan, Hentii Aimag, a fertile section of Mongolia. The goal is to produce thousands of pigs and produce pork for export to Russia. They have shipped in 1999, a 135 ton rail car of pork to Russian market.

A Japanese agency has sent personnel to study company operation and produce an extensive report of possible exporting of horsemeat.

Appendix H

Interview with
Mr. C. H. Bud, General Director,
Ochir Timber Company
P.O. Box 234, Ulaanbaatar 21
Mongolia
Tel: 976-1-632520 Fax: 976-1-631798
E-mail: cbud@magicnet.mn
Monday, May 30 1999

Mr. C.H. Bud's core business is a wood processing firm established in 1990 in Mongolia. He buys raw timber from Russia and produces wood products for export. The company operates a wood processing plant in UB. The wooden products are supplied to both domestic and foreign customers. The company has 165 employees and has the whole cycle of wood processing, from cutting timbers to finished furniture. Raw timber comes from Russia and Malaysia.

He usually processes 200,000 cubic meters per year through his wood mill. He is very active in import and export activities. I invited him to meet with me to find out some facts about timber and wood product trading, within the scope from Russia through Mongolia, to China business. A major finding has been that meat can be traded in Russia for timber much easier then for cash, which leaves the meat processor with the problem of turning timber into cash by selling the timber to China. The biggest problem expressed by the meat processors is that the transaction of turning timber into cash has been cumbersome and takes too long. It was felt that if we could identify a central figure in that type of trade, we might be able to lubricate such transactions for the meat processor.

Mr. Bud is a vice-president in the Wood Processors Association of Mongolia, as well as a member of the American Association of Home Builders. He states that there is a move on to create an institution in Mongolia that would be a central warehouse and would facilitate the Russia-to-China wood trade transactions. He is a participant in the "Silver Bridge" project, which proposes to build a warehouse at the railway junction in UB and operate "in Bonded area" with modern communication systems connecting the partners in Russia and China.

The major complication of this trade is the different size of the railway tracks between the Russian railway and the Chinese railway. This means that timber must be off-loaded at the border into Chinese railway cars or that the wheels are changed for each car at the Chinese border crossing point. Both are cumbersome activities. Additionally, the Chinese buyers try settling the transaction in Chinese Yaun and not in a hard currency. Mr. Bud pledged he would be glad to cooperate with meat processors or any association that represented them to assist in the disposal of timber to facilitate the cash repayment for the meat sold in Russia.

Appendix I

Interview with
Mr. Setev Byambaa, State Secretary,
(*Translator was Mr. Bayaraahuu)*
Ministry of Agriculture and Industry
Monday, May 30 1999

This meeting was called for "fact finding" in order to get the Ministry positions on some of the important issues being discussed. In general, the secretary stated that the Ministry is in complete support of any activities that strengthen exports. He said they have no restriction for exporting, other then sanitary issues. He explained that they have modernized some facilities so they might ship product to the major developed countries. Finland, for instance, has modernized one of the plant and promised to take meat in payment. However, they have never taken the meat. I pointed out that the protectionist veil over the major developed economies would inhibit Mongolia exports. He confirmed that Mongolia has some 30 to 40 million animals on pasture. He pointed out that Mongolian meat processors have a capacity to process 60,000 tons of carcasses per year and that they still might have even more hidden capacity. He said they have had pilot projects with several potential export countries, i.e., Russia, Kazakhstan, Japan, Germany, Middle East, South Korea, and Bulgaria.

Mongolia has exported 7,000 tons in 1998, and plans to export 13,000 tons in 1999, and so far this year they have shipped 10,000 tons, according to the secretary. They are currently in negotiations with several countries for active, cooperative veterinary and sanitary agreements. He has completed and signed with Russia and Kazakhstan, and is finalizing agreements with Turkey, Bulgaria, South Korea and Japan.

He identified two problems. One, there is an overgrazing situation building up on Mongolian mountain pastures, and two, the Russian financial crisis has impacted Mongolia's ability to get paid. I explained that many individuals I have spoken to claim that they have a major working capital problem. Specifically, when they take oil in barter and trans-ship it to the state-owned power company, they have not been paid. He gave no response to this issue.

ANNEX AA
REGULATIONS GOVERNING PLANT FACILITIES FOR EXPORTING TO THE UNITED STATES[4]

305.2 Separation of official establishments

(a) Each official establishment shall be separate and distinct from any unofficial establishment.

(b) Inspection shall not be inaugurated in any building, any part of which is used as living quarters, unless the part for which inspection is requested is separated from such quarters by floors, walls, and ceilings of solid concrete, brick, wood, or similar material, and the floors, walls, and ceilings are without openings that directly or indirectly communicate with any part of the building used for living quarters.

COMMENT:
As written, this regulation permits the FSIS Administrator's discretion in determining the extent of separation required. In the past, the requirement has been administered quite rigidly. No communication by means of doorways, stairways, elevators, passageways, loading or unloading platforms, or loading courts was permitted between official and unofficial plants. Where interconnections exist, the department will consider proposals on an individual basis, provided that the transfer of uninspected product would be difficult or unusual. It is essential, however, that separation be maintained to the extent necessary to assure that unfit or uninspected product does not become commingled with inspected products.

[4] To serve as a basis for information, we have reproduced in part the federal meat inspection regulations and included commentaries on these sections of which explanations would be informative. Source: USDA Food Safety and Inspection Service—Federal Facilities Requirements for Meat Plants.

305.3 Sanitation and adequate facilities
Inspection shall not be inaugurated if an establishment is not in a sanitary condition nor unless the establishment agrees to maintain a sanitary condition and provides adequate facilities for conducting such inspection.

307.1 Facilities for program employees
Office space, including necessary furnishings, light, heat, and janitor service, shall be provided by official establishments, rent free, for the exclusive use for official purposes of the inspector and other assigned program employees. The space set aside for this purpose shall meet with approval of the circuit supervisor and shall be conveniently located, properly ventilated, and provided with lockers suitable for the protection and storage of program supplies and with facilities suitable for program employees to change clothing if such facilities are deemed necessary.

At the discretion of the Administrator, small plants requiring the services of less than one full-time inspector need not furnish facilities for program employees as prescribed in this section, where adequate facilities exist in a nearby convenient location. Laundry service for inspectors' outer work clothing shall be provided by each establishment.

COMMENT:
Separate office space will be required in plants where one or more inspectors are assigned on a continuing basis. Separate office space may not be required.

307.2 Other facilities and conditions to be provided by the establishment
(a) Satisfactory pens, equipment, and assistance for conducting antemortem inspection and for separating, marking, and holding apart from passed livestock those marked "US Suspect" and "US Condemned" (Pens, alleys, and runways shall be paved, drained, and supplied with hose connections for cleanup purposes.

COMMENT:
The fundamental requirement is that the pens be maintained in a sanitary condition at all times and that there be no accumulation of mud, manure, or other material that might contaminate the carcass during dressing or allow flies to breed.

(b) Sufficient light to be adequate for proper conduct of inspection

COMMENT:
The intensity of light is measured by a light meter that registers the amount of light available in foot candles. Briefly, these regulations are as follows:

An intensity of at least 50 foot-candles is required at all inspection stations. This is the location where the inspector examines the lymph nodes of the head, the visceral organs, or the dressed carcass. Twenty foot-candles should be provided in the working areas of the rest of the plant. This is measured at the level of working surfaces (such as tabletops). Ten foot-candle intensity is required in livestock pens where antemortem inspection is performed and at the level of the foreshanks of carcasses in the cooler.

(c) Racks, receptacles, or other suitable devices for retaining such parts as the head, tongue, tail, thymus gland, viscera, and all parts and blood to be used in the preparation of meat food products or medical products; until after the post-mortem examination is completed—in order that they may be identified in case of condemnation of the carcass. Additionally, equipment, trucks, and receptacles for the handling of viscera of slaughtered animals so as to prevent contact with the floor; and trucks, racks, marked receptacles, tables, and other necessary equipment for the separate and sanitary handling of carcasses or parts passed for cooking.

COMMENT:
It is important to keep all parts of a carcass together and identified. The various parts and organs of different animals cannot be mixed together until after the carcass and all its parts have passed inspection. Combination use of equipment is possible. For example, cattle heads can be flushed and washed, then inspected and even boned on the same loop. Visceral organs can be inspected, then washed and trimmed on the same table as long as the table is properly sanitized between operations.

(d) Tables, benches, and other equipment on which inspection is to be performed must be of such design, material, and construction as to enable program employees to conduct their inspection in a ready, efficient, and clean manner.

COMMENT:
In general, post-mortem inspection consists of slicing and looking at certain lymph nodes, palpating certain organs, observing dressed carcasses, and, in the case of cattle, slicing the cheek muscles. The plant must provide a viscera inspection truck and/or pan for the heart, liver, and spleen, plus a separate inspection receptacle for inspection of the paunch and intestines. Specifically, the minimum sized receptacles are: **For pigs**—A large pan about 24" x 36" x 3" is necessary for examining the viscera. The head, if detached from the carcass, may be inspected in the same pan using a detachable head holder. **For cows—**A large pan about 24" x 36" x 3"

must be provided for abdominal viscera, and a separate pan about 12" x 36" x 3" is necessary for thoracic viscera.

(e) Watertight metal trucks or receptacles for holding and handling diseased carcasses and parts, so constructed as to be readily cleaned; such trucks are receptacles to be marked in a conspicuous manner with the phase "US Condemned" in letters not less than 2" high, and when required, to be equipped with facilities for locking or sealing.

COMMENT:
Provisions for locking and sealing are not necessary if the inspector supervises the denaturing of condemned carcasses or parts at the time of disposition.

(f) Adequate arrangements, including liquid soap and cleansers, for cleaning and disinfecting hands; for disinfecting all implements used in dressing diseased carcasses, floors, and such other articles and places as may be contaminated by diseased carcasses or otherwise.

COMMENT:
Hand washing basins operated by foot pedals must be provided. Hot water disinfecting tanks (commonly called sterilizers) must be provided to disinfect tools used in dressing diseased carcasses. The water provided for disinfecting contaminated implements must be 180 degrees F. A thermometer must be attached to the water line at the outlet so that the inspector may check the water temperature. The discharge from equipment such as lavatories or hand-washing basins should connect directly to the drainage system and not be allowed to flow over the floor to the nearest drain.

308.3 Establishments, sanitary condition requirements
(a) Official establishments shall be maintained in sanitary condition, and to this end, the requirements of this section shall be complied with.

(b) There shall be abundant light, of good quality, well-distributed, and sufficient ventilation for all rooms and compartments to ensure sanitary conditions.

COMMENT:
Ventilation—Where hot carcasses, hot water, or other liquids are exposed to cold air, considerable vapor may develop. If this vapor interferes with the proper conduct of operations and inspection or causes condensation and dripping, it must be eliminated. The problem is usually solved with space heaters to warm the air or fans to exhaust the vapor.

(c) There shall be an efficient drainage and plumbing system for the establishment and premises, all grains and gutters shall be properly installed with traps and vents approved by USDA.

COMMENT:
The number, location, and size of drain outlets and lines depend on the type and volume of the operation. Where wet operations such as slaughtering and curing are conducted, drains and hose outlets are necessary. When drains are installed, they must be vented and properly trapped. This means U- or P-shaped traps are acceptable. However, S, Bell, Crown Vented, or any trap that depends on movable parts for its seal is not acceptable. The drain inlets must have covers to prevent the entry of rodents.

(d) The water supply shall be ample, clean, and potable, with adequate facilities for its distribution in the plant and its protection against contamination and pollution. Every establishment shall make known and whenever required shall afford opportunity for inspection of the source of its water supply, the storage facilities, and the distribution system. Equipment using potable water shall be so installed as to prevent back-siphonage into potable water system. Non-potable water is permitted only in those parts of official establishments where no edible product is handled or prepared, and then only for limited purposes such as ammonia condensers not connected with

the potable water supply, in vapor lines serving inedible product rendering tanks, in connection with equipment used for hashing and washing inedible products preparatory to tanking, and to sewer lines for moving heavy solids in the sewage. Non-potable water is not permitted for washing floors, areas, or equipment involved in trucking materials to and from edible product departments; nor is it permitted in hog-scalding vats, dehairing machines, or vapor lines serving edible product rendering equipment, or for cleanup of shackling pens, bleeding areas, or runways within the slaughtering department. In all cases, non-potable waterlines shall be clearly identified and shall be separated from the potable water supply line to insure against accidental contamination. There can be a method of connecting the two, located outside the plant, if necessary for fire protection.

(d) (2) The USDA may permit the reuse of water in vapor lines leading from deodorizers used in the preparation of lard, tallow and other similar products and the equipment used for the chilling of canned product after retorting provided that the reuse is for identical original purpose and the following precautions are taken to protect the water that is reused:

(i) All pipelines, reservoir, tanks, cooling towers, and the like equipment employed in handling the reused water are so constructed and installed as to facilitate their cleaning and inspection.

(ii) Complete drainage and disposal of the reused water, effective cleaning of the equipment, and renewal with fresh potable water are accomplished at such intervals as may be necessary to assure an acceptable supply of water for the purpose intended as determined by the inspector.

(iii) Effective chlorinating (not less than approximately 1 part per million of residual chlorine at any point within the cooling system) of reused water utilized for cooling canned product is maintained, but with the understanding that chlorinating alone is not to be relied upon entirely nor to be accepted in lieu of the requirements listed above in subdivision (i) and (ii).

(e) The floors, walls, ceilings, partitions, posts, doors and other parts of all structures shall be of such materials, construction, and finish as will make them susceptible of being readily and thoroughly cleaned. The floors shall be kept watertight. The rooms and compartments used for edible product shall be separate and distinct from those used for inedible product.

COMMENT:

Floors -- Concrete, tile, brick, or other imperious material properly pitched to drains should be provided in areas where wet operations such as slaughtering or curing are conducted. Wood floors are not acceptable in such rooms. Wood floors that are covered reasonably free of cracks or floors that are covered with tile, linoleum, or plastic materials are acceptable (without drains) where limited cutting, fabricating, or other relatively dry operations are conducted if the floor can be kept sanitary.

Walls -- In rooms where wet operations are conducted, the walls should be of steel-troweled cement plaster, tile, glazed brick, or other acceptable material. Concrete or cinder block sealed with plastic type paint is acceptable but not recommended. Wood walls are acceptable in coolers where boxed product is stored if they are clean and in good repair. Smooth cement plaster or other materials mentioned above are preferred. Metal paneling, properly caulked at the seams and rust resist (e.g. stainless steel, hot dip galvanized steel and aluminum are common), is also acceptable. The important thing is that the walls be smooth, washable, and free of cracks and crevices. Where meat is fabricated, it should not come in contact with walls. Installing rust-resistant backboards on tables or using other acceptable shielding can prevent this.

Ceilings -- Ceilings should be cleanable and free of condensation and flaking paint. Finished wood, cement asbestos, and other smooth washable materials will be considered acceptable

provided they are in good repair. Uncovered insulation or porous materials such as acoustic tile are not acceptable. The use of paint on ceiling should be avoided in rooms where moisture and vapor collect. Paints tend to peel in such situations, creating a product contamination hazard.

Posts -- These usually constitute a problem only if rails run close enough to them that they constantly come into contact with carcasses or cuts. In such cases, they may become splintered or coasted with fat and meat juices. A common solution to this problem is to cover the point of contact with stainless steel or other rust-resistant metal so that posts can be maintained in a sanitary condition.

Door and Doorways -- There is no specific requirement for doorway widths in existing construction. However, the doorway should be wide enough so there is no contact between doorways and the product. The recommended width doorway through which product is transferred on rails is 4.5 feet, and 5 feet is recommended for doorways used by hand trucks. Such doors and doorways, if of wood, should be clad with rust-resident metal with tight soldered seams.

Separation of Edible and Inedible Rooms -- In most slaughtering plants, inedible materials such as hides, feet, and intestines are accumulated until the end of the kill when they are picked up by a rendering company or otherwise disposed of. (In the Mongolian firm case, this is not necessary since all product is processed on-site)

(f) Rails should be located and passageway space provided so exposed product does not come in contact with posts, walls and other fixed parts of the building, or with barrels, boxes, and other containers trafficked thought holding and operating areas. Exposed product shall not be placed or stored beneath carcass in cooler or holding areas.

(g) The rooms and compartments in which any product is prepared or handled shall be free from dust and odors from dressing and toilet rooms, catch basins, hide cellars, casing rooms, inedible tank and fertilizer rooms and livestock pens.

(h) Every practical precaution shall be taken to exclude flies, rats, mice, and other vermin from official establishments. The use of poisons for any purpose in rooms or compartments where any unpacked product is stored or handled is forbidden, except under such restrictions as the circuit USDA supervisor prescribes precautions. The use of insecticides, rodenticides, and similar pest control substances in hide cellars, inedible product departments, outbuildings, or similar places, or in storerooms containing canned or tierced products is not forbidden; but only those substances approved by the USDA are allowed. So-called rat viruses shall not be used in any part of an establishment or the premises.

COMMENT:
All doors and windows, which open, must be screened to keep out flies and other insects. Floors, walls and ceilings must be kept in excellent repair to exclude rodents and vermin. Cracks and crevices in which roaches can harbor shall be eliminated. This is particularly important where there is heat and moisture such as in rendering or cooking areas.

Insecticides having a residual action are not permitted in rooms where edible product is handled. So-called "knock down" sprays may be used after meat is removed from the room if equipment or tables which it can come in contact with are washed before reuse. Wall-mounted dispensers or other devices that discharge or vaporize nonresidual insecticides are permitted in rooms where meat is handled only after all product is removed.

All rodenticide must be in approved containers. Rodenticide must be removed from edible product departments before operations are resumed. Certain compounds such as 1080 (sodium fluoracetate), arsenic, strychnine, thallium, yellow phosphorus, and parathion are so toxic that they may not be used in meat plants under any circumstances.

308.4 Sanitary facilities and accommodations requirements
Every official establishment shall furnish adequate sanitary facilities and accommodations. Of these, the following are specifically required:

(a) Dressing rooms, toilet rooms, and urinals shall be sufficient in number, ample in size, and convenient in location. The rooms shall be provided with facilities to provide abundant light of good quality and well distributed. They shall be properly ventilated and shall meet all requirements of the regulations in this part as to sanitary construction and equipment. They shall be separate from the rooms and compartments in which products are prepared, stored, or handled. Where both sexes are employed, separate facilities shall be provided.

(b) Acceptable lavatories, including running hot and cold water, soap, and towels, shall be placed in or near toilet and urinal rooms and also at such other places in the establishment as may be essential to assure cleanliness of all persons handling any product.

(c) Toilet soil lines shall be separate from house drainage lines to a point outside the building, and drainage from toilet bowls and urinals shall not be discharged into a grease catch basin.

(c) Properly located facilities shall be provided for cleaning and disinfecting utensils and hands of all persons handling any product.

308.6 Scabbards for knives
Scabbards and similar devices for the temporary retention of knives, steels, triers, and the like by workers and others at official establishments shall be constructed of rust-resisting metal or other impervious material, shall be of a type that may be readily cleaned, and shall be keep clean.

308.7 Room, compartments, and so on to be clean and sanitary
Rooms, compartments, places, equipment, and utensils used for preparing, storing, or otherwise handling any product, and all other parts of the establishment shall be kept clean and in sanitary condition. There shall be no handling or storing of materials, which create an objectionable condition in rooms, compartments, or places where product is stored.

308.8 Operations, procedures, rooms, clothing, utensils, etc., to be clean and sanitary

(a) Operations and procedures involving the preparation, storing, or handling of any product shall be strictly in accord with clean and sanitary methods.

(b) Butchers and others who dress or handle diseased carcasses or parts shall, before handling or dressing any other carcass or parts, cleanse their hands with liquid soap and hot water. Implements used in dressing diseased carcasses shall be thoroughly cleansed with hot water having a minimum temperature of 180 degrees F or in a disinfectant authorized by the USDA, followed by rinsing in clean water. The employees of the establishment who handle any product shall keep their hands clean, and in all cases after visiting the toilet rooms or urinals shall wash their hands before handling any product or implements used in preparation of product.

308.13 Inedible operating and storage rooms, outer premises, docks, driveways, approaches, pens, alleys, and flybreeding material

Other conditions
All operating and storage rooms and departments of official establishments used for inedible materials shall be maintained in acceptably clean condition. The outer premises of every official establishment, including docks and areas where cars and vehicles are loaded, and the driveways, approached, yards, pens, and alleys, shall be properly paved and drained and kept clean and in orderly condition.

All catch basins on the premises shall not be located in departments where product is prepared, handled, or stored. The accumulation on the premises of official establishments of any material in which flies may breed, such as hog hairs, bones, paunch contents, or manure is forbidden. No other conditions that may result in adulteration of product or interfere with inspection shall be allowed in any official establishment or on its premises.

ANNEX BB

GUIDELINE FOR THE PRODUCTION OF FRESH MEAT INTENDED FOR EXPORT TO THE EU[2]

Organization of the document

I. Requirements For All Establishments
II. Specific Requirements For Slaughterhouses
III. Hygiene Of Staff, Premises, And Equipment
IV. Antemortem Inspection
V. Slaughter, Evisceration, And Meat Handling Hygiene
VI. Facility And Health Requirements For Cutting Plants
VII. Health Mark Labels
VIII. Meat And Offal Wrapping And Packaging
IX. Storage
X. Transportation
XI. Water Testing
XII. Residue Testing
XIII. Trichinae Control
XIV. Export Certification
XV. FSIS Oversight Of Plant Operations
XVI. Plant Approval Process

[2] Source USDA, Export Program Office
[3] Reference to USDA and/or FSIS is not appropriate to the Mongolian case. Requirements will be identical for the appropriate Mongolian Agriculture Ministry Agency.

I. Requirements for All Establishments

1. Specifications for Rooms where Fresh Meat is Produced, Worked on, Stored, or Transported Through

A. Floors must be waterproof and easily cleaned, sanitized, and drained. Wastewater must be positively dueled to a floor drain. Open drainage is not acceptable.

B. Walls in slaughter rooms must be smooth, durable, and impermeable, with a light-colored, washable surface extending to a height of at least three meters; in chilling or refrigeration rooms and in stores, the walls must be coated to at least storage height; in all other rooms, coating must extend at least two meters.

C. Wood is prohibited in instruments and working equipment that might contact fresh meat or offals. Overhead wooden beams that support the rail system in coolers and are in good condition, impermeable, smooth, durable, rot-proof, and sealed with an approved waterproof coating are acceptable in exposed product areas. As these wooden beams are replaced, they must be replaced with beams of acceptable material other than wood. Wood is also accepted in rooms where only hygienically packaged fresh meat is stored.

D. Insulation must be rot-proof and odorless.

E. Floor to wall junctions must be rounded or similarly finished, unless they are in freezers.

F. Doors must be durable and non-corrodible.

G. Ventilation must allow good elimination of steam.

H. Lighting may be natural or artificial, but must be adequate and not distort colors.

I. Ceilings must be able to be cleaned easily.

2. Specifications for Cleaning Hands and Tools

   A. There must be an adequate number of clothes-changing rooms with smooth, waterproof, washable walls and floors, wash basins, showers, and flush toilets equipped so that the clean parts of the building are protected from contamination.

   B. Hand-washing facilities must have hot and cold running water or water premixed to a suitable temperature, cleaning and sanitizing products, and a hygienic means of drying hands. These facilities must be as near as possible to working stations.

   C. All water taps must not be hand or arm operable.

   D. Water for sanitizing tools must be readily available and no less than 180°F (82 C).

   E. Wastewater must be ducted directly to a drain. Open drainage is not acceptable. There must be protection against splash of wastewater on product.

   F. Welfare facilities must not open directly into the workrooms.

   G. There must be a sufficient number of wash basins near the toilets.

   H. Showers are not required in cold stores where only hygienically wrapped fresh meat is handled.

3. Protection against Pests and Rodents

   A. There must be appropriate arrangements for protection against pests such as insects and rodents. The program shall include a log of findings and a corrective action plan. The pest control program should be available for review by the IIC and the EU reviewer.

4. Equipment Standards

   A. Instruments and equipment such as, cutting tables or tables with detachable cutting surfaces, containers, conveyor belts and saws shall be made of corrosion-resistant material that will not taint meat and is easy to clean and sanitize.

   B. Surfaces that come into contact, or may come into contact with, meat, such as welds, joints, and fittings, must have smooth surfaces at all times and be corrosion resistant. Galvanized metal surfaces are not acceptable in areas that contact, or may contact, meat or offals.

   C. Meat containers must be stored so that neither the meat nor the container comes into direct contact with the floor or walls.

   D. Watertight, non-corrodible containers with lids and locks must be available to store meat not intended for human consumption and keep it away from persons unauthorized to remove material from them. When such meat is removed from these containers through conduits, they must be constructed and installed so that there is no cross contamination of fresh meat.

5. Facilities Standards

   A. Facilities should be laid out and equipped to assure hygienic handling and protection of meat during all procedures including loading and unloading.

   B. Large quantities of meat not intended for human consumption must be kept under security if the meat is not removed or destroyed at the end of each day.

   C. Refrigeration must be adequate to immediately chill and maintain an internal temperature of not more than 44.6 F (7 C) for carcasses and cuts and 37.4 F (3 C) for offal. Product temperatures must be kept at these levels or less during cutting, boning, wrapping, and packaging. During cutting, the temperature of the cutting room must not exceed 53.6 F (12 C). Frozen meat must reach an internal temperature of 10.4 F (-12 C) or less and may not be stored at a higher temperature thereafter. Temperature requirements must be monitored by the IIC.

D. Rooms used for cutting, boning, wrapping, and storage must have a recording thermometer or recording telethermometer. Rooms where the product being held has reached the required EU temperatures are considered storage rooms. Temperatures must be recorded at least each half-hour. Hand written temperature logs are not acceptable.

E. Refrigeration equipment must allow condensation Co drain without contaminating fresh meat. Condensate must be positively conducted to a drain.

F. A separate room is required for chilling or refrigerating packaged meat that is stored at the establishment.

G. Unpackaged meat may not be stored in chilling or refrigeration rooms intended for packaged meat unless the rooms are first cleaned and sanitized.

H. Chilling or refrigeration rooms must be large enough for preservation of all meat produced.

I. Packaging must be carried out in a separate room unless conditions described under Section VIII.4., Wrapping and Packaging of Fresh Meat, are met.

J. Packaging and wrapping materials must be stored hygienically in a separate room if those operations are done on the premises.

K. Liquid and solid disposal systems must meet hygiene requirements.

L. A pressurized supply of potable water must be available. See Section XI.

M. Non-potable water is allowed for steam production, fire fighting, and to cool refrigeration equipment, as long as it is never used for other purposes, poses no risk of contamination to fresh meat, and has pipes that clearly distinguish it from fresh water pipes.

N. Detergents, sanitizers, and other cleaning agents must be kept in a separate secure storage area.

O. Any facilities or equipment used to transport fresh meat must be adequately cleaned and sanitized. Cleaning and sanitizing of meat transport trucks and live animal transport trucks can take place on or off the premises of the plant provided that information about the location of the sites is available to the IIC from plant management.

P. Facilities must be available for inspection personnel to carry out their inspections efficiently and they must have an adequately equipped, locked room exclusively for their use.

II. Specific Requirements for Slaughterhouses

1. In addition to the general requirements for all establishments listed above, slaughterhouses must also meet the following requirements:

A. Physical Plant

1) Holding pens must have durable walls and floors that are impermeable and easy to clean and sanitize. Wood is not recommended for use in pens and should gradually be replaced by other material. These facilities also must allow for feed, water, and drainage, if necessary.

2) Slaughter areas must be sufficiently large to allow the work to be carried out satisfactorily.

3) There must be a means of controlling access to and exit from the slaughterhouse. A perimeter fence enclosing the facility is required. Natural barriers may be considered in lieu of fencing.

4) There must be a distinct separation between clean and dirty working areas of the building and a means of protecting the clean areas from contamination.

5) Chilling or refrigeration rooms must be available and equipped with corrosion-resistant fittings designed to prevent fresh meat from making contact with the floors or walls during transportation or storage.

6) There must be a special section for storage of intestinal content if it is held on the premises.

7) There must be a special room equipped for trichinella examinations, if they are to be done on the premises.

B. Equipment:

1) Equipment for dressing (after stunning) must allow the process to continue as far as possible while the animal is suspended. At no time is the suspended animal allowed to come into contact with the floor during dressing.

2) There must be an overhead system of rails Co handle carcasses after dressing.

C. Sick or Suspect Animals:

1) Effluent from animals in the suspect pen must be confined to the suspect pen and the drainage system for that pen. The drainage system should exclude any possibility that healthy animals can come in contact with effluent from animals in the suspect pen.

2) Wood must not be used in pens designated for sick or suspect animals.

3) There must be lockable areas reserved for slaughter of these animals and a secure place to keep detained meat or meat declared unfit for human consumption.

4) Separate premises for the slaughter of these animals is not necessary if slaughter is done at the end of a normal slaughtering day, provided that no fresh meat is contaminated and all equipment and facilities are thoroughly cleaned and sanitized under official supervision before the normal slaughter day resumes.

D. Pig Slaughter

1) Pigs may be slaughtered in the same facility as other animals if a special place is provided for their slaughter or, in the case of the absence of such a place, if slaughter takes place at different times. In any case, there must be a special place where scalding, depilation, scraping, and singeing of pigs are carried out that is separated from the slaughter area by at least five meters of open space or by a partition that is at least three meters high.

2) If pigs and other animals are not slaughtered at different times, then a separate area described above must be available for pig slaughter and processing.

E. Handling Stomachs and Intestines

1) Where this operation takes, place, there must be separate rooms reserved exclusively for:

a) Emptying and cleaning stomachs and intestines.

b) Dressing guts and tripe, if it is done in the slaughterhouse. Dressing guts and tripe may be done in the same area where the emptying and cleaning of stomachs and intestines is done only if cross contamination is avoided.

2) Separate rooms will not be necessary for stomach and intestine processing if it is done by closed-circuit mechanical equipment with a good ventilation system and also satisfies the following requirements:

a) The process of separating the stomachs from the intestines and of emptying and cleaning stomachs must be done hygienically. This operation must be carried out in a special place separated from any exposed fresh meat by a partition that extends from the floor to an acceptable height.

b) The design and operation of the equipment that performs this function must prevent contamination of fresh meat.

c) There must be an air extractor that eliminates odors and any risk of aerosol contamination.

d) There must be a device to perform a closed-circuit evacuation of the residual stomach water and any contents and flush it into the drainage system.

e) The conveyor carrying the stomachs to and from the machinery must be clearly separated from those carrying fresh meats.

f) After cleaning and draining, stomachs must be hygienically removed.

g) Stomachs must not be handled by workers who handle other fresh meat, and workers who handle stomachs must not have access to other fresh meat.

F. Miscellaneous

1) There must be a separate room or area for preparing and cleaning offal.

a) Edible offal packaging must be done in a separate place from the slaughter and processing area.

b) Hides, horns, hooves, and pigs' bristles not removed on a daily basis from the facility must be stored in closed, leakproof containers until they are removed.

c) Heads must be stored a sufficient distance from other offal if they are not processed on the slaughter line.

III. Hygiene of the Staff, Premises, and Equipment in the Establishments

1. Staff

A. Staff performing slaughtering tasks or working on and handling meat must start the day with fresh and clean work clothes and must change them throughout the day, as necessary, as they become soiled. Plant management must be able to describe and demonstrate how this requirement is carried out to the satisfaction of the IIC.

B. Staff handling exposed or wrapped fresh meat or working in rooms and areas in which this meat is handled, packaged, or transported must wear clean and easily cleaned headgear, footwear, and clothes. Clothing of a light color is a requirement. Clean neck shields or other protective clothing is required as necessary.

C. Staff must wash and sanitize their hands several times during the workday, and after every break.

D. Drop hoses should only be used provided that:

1) Contamination of fresh meat by splashing is prevented

2) Wastewater is ducted directly to a drain

3) They are not used as a substitute for suitable hand washing facilities

4) May generally only be used for carcass wash following postmortem inspection

E. Any staff working with or coming into contact with sick animals or infected meat immediately must carefully wash their hands and arms with hot water and a sanitizing agent.

F. Smoking is forbidden in workrooms, storerooms, loading and unloading areas, receiving areas, marshaling areas, and other areas and corridors through which fresh meat is transported.

G. When hired, personnel shall be required to provide a medical certificate stating their general health for working with fresh meat.

1) Eligible employees

a) Personnel handling exposed product must have an Initial medical certification stating their absence or lack of impediment for working with meat.

b) Cold storage employees that handle only packaged meat, administrative personnel, cleaning personnel, and outside employees are not required to have medical certification.

2) Certification language

a) The following terminology should be used by the physician:

"It is my opinion that the employee(s) listed below has (have) no impediment to handling fresh meat."

b) A medical practitioner must sign the statement. The basis for signing is left to the professional judgement of the medical practitioner. The practitioner's name should also be typed on the certificate.

c) Individual certificates can be prepared for each employee or a single certificate can be used which refers to an attached list of names.

d) The medical certification should be available for IIC review. Certification should be present and include the required statement.

3) Frequency of certification

a) An initial certification is required for each person handling fresh meat before the start of employment

b) Renewal of the certification on a periodic basis is not required. Subsequent follow up on the medical suitability of the employee is done according to USDA requirements. (9 CFR 308.14) Plant management must demonstrate and document the way in which the USDA requirement is applied. This information must be available to the IIC.

2. Premises

A. No animal may enter the establishment unless it is either presented for slaughter, or is needed to help operate the establishment.

B. Potable water must be used for all purposes except those noted in Section I.E.13.

C. Spreading sawdust or any similar substance on the workroom floors or where fresh meat is stored is strictly forbidden.

3. Equipment

A. All equipment and instruments used to work on meat shall be kept clean and in a good state of repair. They shall be carefully cleaned and sanitized several times during the workday, at the end of the workday, and before being re-used after becoming soiled. Knives and other tools that come in contact with the external surface of the hide must be cleaned before being used on the clean portions of the carcass.

B. Meat cutting instruments must be used solely for cutting meat.

C. Meat and meat containers shall not come into direct contact with the floor.

D. Detergents, sanitizers, and similar cleaning products must not be used in a way that adversely affects fresh meat. Handling of such material must avoid any possibility of contamination of meat or packaging material. They must be thoroughly rinsed from instruments and equipment with potable water.

4. Sanitation and Facility Maintenance Programs

A. Each establishment must have a sanitation and a facility maintenance program in place. These programs should be available for review by the IIC and the EC reviewer.

B. The EC reviewer will request to review the microbiological programs, if available.

IV. Antemortem Inspection

1. Handling of the Animals

A. All animals must undergo antemortem inspection the day they arrive at the slaughterhouse or before the daily slaughter begins. If an animal is held overnight after being inspected, it must be re-inspected before slaughter.

B. Each animal must bear a mark so that its origin may be identified.

C. All animals must be handled humanely.

D. All tired or agitated animals must be rested for at least 24 hours before slaughter, unless deemed otherwise by the veterinarian.

2. Inspection

A. An official veterinarian must perform antemortem inspection.

B. Inspection must determine whether the animal has or may have a disease that is communicable to man or animals.

C. Inspection must determine whether the animal has any disorder including injury that would render the meat unfit for human consumption.

D. Inspection must determine whether the animal has had any drugs or medications administered that have not cleared the system.

E. Inspection must determine whether the animal has consumed any other substance that would render the meat unfit for human consumption.

F. Any animal with any of the conditions mentioned above must undergo a detailed examination to make a proper diagnosis and must be withheld from slaughter pending a diagnosis that qualifies Chat animal to be used for human food purposes.

G. A detailed postmortem examination may be necessary in order to make a proper diagnosis. In that event, it must include a bacterial examination and a residue analysis.

H. Animals not acceptable for slaughter must be removed as soon as possible from the suspect pen.

V. Slaughter, Evisceration, and Meat-Handling Hygiene

1. Slaughter

A. Poll stunning is not allowed.

B. All animals must be slaughtered and bled immediately. All animals, except pigs, must immediately undergo hide removal.

C. Pigs must have bristles removed immediately with debristling agents that are thoroughly rinsed afterward with potable water.

D. It is not necessary to skin the heads of calves and ovines as long as the heads do not contaminate any fresh meat.

2. Evisceration

A. All animals must be completely eviscerated within 45 minutes after stunning. For ritual slaughter, evisceration must take place within 30 minutes after bleeding.

B. Lungs, heart, liver, kidney, spleen, and mediastinum either may be detached or remain attached by the natural connections.

C. Plant management before inspection must incise pork hearts by FSIS personnel.

D. Veal hearts must be incised by plant management before inspection by FSIS personnel.

E. The head, tongue, digestive tract, lungs, heart, liver, kidney, spleen, mediastinum, and any other part of the animal that is detached must remain near the carcass until the inspection is complete. The penis may be discarded immediately if there are no pathological symptoms or lesions.

F. Kidneys of all species must be removed from their fatty covering. For all bovine animals, swine, and solipeds, the peri-renal capsule also must be removed.

G. Blood intended for human consumption must be collected in absolutely clean containers and stirred only with instruments that meet hygienic requirements. Hand stirring is not permitted.

3. Meat Handling

A. The hygienic dressing procedures are left to the judgement of the IIC. Specific concerns will be addressed at the time of the ECD review and the final EU review.

B. Knives and other tools that come in contact with the external surface of the hide must be cleaned before being used on the clean portion of the carcass.

C. Meat may not be wiped with a cloth or other material.

D. Knives and other tools must not be stored or transported in removal.

E. Pigs must have bristles removed immediately with debristling agents that are thoroughly rinsed afterward with potable water.

F. It is not necessary to skin the heads of calves and ovines as long as the heads do not contaminate any fresh meat.

4. Fresh Meat Handling

A. Only as much fresh meat as can be processed at one time may be brought into rooms designed specifically for that purpose.

B. All meat entering the cutting facility must be checked and, if necessary, trimmed. These workstations must be adequately lighted and equipped with an accessible hand wash basin and sanitizer.

C. After cutting and packaging, fresh meat must be transferred to appropriate chilling or refrigeration rooms.

5. Temperature Regulation
   A. The temperature of the cutting room must not exceed 53.6 F (+12°C) during cutting.
   B. The internal temperature of meat must be kept at a constant 44.6 F (+7°C) or less during cutting, boning, wrapping, and packaging.
   C. Livers must be kept at a constant 37.4 F (+3°C) or less during slicing, wrapping, and packaging.
   D. Kidneys and head meat must be kept at or below 37.4 (+3°C) during cutting, boning, slicing, dicing, wrapping, and packaging.
6. Hot Processing Requirements
   A. Meat may be cut while warm if it is transferred directly from the slaughter premises to the cutting room.
   B. The slaughter facility and the cutting room must be adjacent Co allow transfer of hot meat in a single operation.
   C. Cutting must be done immediately after transfer.
   D. After cutting and packaging, the meat must be transferred Co an appropriate chilling room as soon as possible.
7. Cleanliness
   A. Meat must have blood clots and bone splinters removed and the meat must not become soiled.
   B. Meat not intended for human consumption must be immediately placed in special rooms or containers to prevent-contamination of fresh meat.

VI. Inspection Requirements

1. The Veterinary Medical Officer (VMO) is responsible for:
   A. Monitoring the entry and exit of fresh meat.
   B. Inspecting fresh meat in cutting plants and cold storage facilities.
   C. Health inspection of fresh meat prior to cutting and before it leaves the cutting or storage plant.
   D. Monitoring the cleanliness of the premises, facilities, instruments, and equipment, as well as the staff hygiene and clothing.

VII. Health Mark Labels

1. Health mark labels must be applied to each carton of product in such a manner that the health mark label is destroyed when the package is opened. The health mark label must bear the following information:
   A. An oval mark at least 2.5 in (6.5 cm) wide by 1.8 in (4.5 cm) high.
   B. Within the oval:
      1) In the center—the establishment number.
      2) Within the upper or lower part—the letters USA.
      3) The letters must be at least 0.3 in (0.8 cm) high and the numbers should be at least 0.4 in (1 cm) high.
   C. A sequential serial number that is unique to each health label for that establishment.
   D. The health mark labels and brands must be kept under security by the IIC in a manner analogous to USDA brands. The IIC is responsible for maintaining an

inventory of the health mark labels. Health mark labels should be given to plant management only while eligible products are being identified and marked and only for the length of time necessary to complete the task.

E. Carcasses must be stamped with ink or hot branded according to 1a). and 1b). above. Those carcasses weighing more than 143 pounds (65 kg) must be stamped in at least the following places: external surface of the thighs; loins; back; brisket; and shoulder. Other carcasses must be marked in at least four places on the shoulders and on the external surface of the thighs. Carcass stamping is not required if the carcasses are slaughtered, cut, and packaged within the same establishment. Plant management must assure, to the satisfaction of the IIC that proper identification of eligible-carcasses is maintained throughout the establishment.

VIII. Meat and Offal Wrapping and Packaging

1. Wrapping Specifications

A. Must be transparent and colorless.

B. Must not alter the organoliptic properties of the meat.

C. Must protect meat from contamination with substances that are harmful to human health.

D. May not be reused.

E. Fresh cut meat must be hygienically wrapped immediately after cutting.

F. All fresh cut meat and offal must be wrapped, unless it is suspended throughout transportation.

G. Cuts of solid outer pig fat and belly need not be wrapped.

H. Sliced bovine livers must be wrapped individually in a package that contains only a complete sliced organ presented in its original form.

2. Packaging Specifications

A. Packaging is defined as combo bins paperboard boxes, etc.

B. All packaged offal and meat must be stored in a separate room from exposed fresh meat.

C. Must protect meat from contamination with substances that are harmful to human health.

D. Must be strong enough to protect the meat during transportation.

E. Must not alter the organoliptic properties of the meat.

F. Packaging may be reused only if it is made of corrosion-resistant material that is easily cleaned and has been previously cleaned and disinfected.

G. Wrapped meat must be packaged. When wrapped meat also meets the intent of the packaging specifications there is no need to provide a second protective layer of packaging and the wrapping need not be transparent and colorless.

H. Packaging may contain only meat from the same animal species.

3. Packaging Offal

A. Livers of bovine animals, swine, and solipeds must be hot branded according to the health mark specifications listed in Section VII.

B. All other offal must be stamped in ink or hot-branded as above, unless wrapped or packaged, and marked accordingly.

C. All packaged cut meat and offal, including sliced bovine livers, must bear a health mark Chat meets the above specifications. The establishment number of the cutting plant, if not the same as the slaughterhouse, must appear in the mark.

D. Offal that is wrapped at the slaughterhouse must have the establishment number of the slaughterhouse on the wrapper.

E. The health mark must appear on a label affixed to the packaging, or printed directly on the packaging. In either case, it must be placed in such a way so as to be destroyed when the package is opened.

F. The label must show a serial number.

G. Wrapping that also serves as protection may have a label affixed to it directly.

4. Facilities and Procedures

A. Cutting, boning, wrapping, and packaging may take place in the same room as long as the following conditions are met:

1) The room must be large and arranged so that the operation remains hygienically sound.

2) All packaging and wrapping materials must be sealed in a protective cover immediately after manufacture to prevent contamination. Pallets of carton flats should be shrink-wrapped at the time of manufacture.

3) Packaging covers must not be damaged during transportation to the establishment.

4) Packaging material must be held in separate rooms that are dust and vermin-free. There must be no exchange of air between these storage rooms and rooms that contain substances that might contaminate fresh meat.

5) Packaging must not be stored on the floor.

6) Packaging must be assembled under hygienic conditions before being brought into the packaging room (including packaging area of the kill floor).

7) Packaging must be brought into all packaging rooms or areas without being contaminated and it must be used immediately.

8) Packaging must not be handled by staff handling fresh meat.

9) Packaged meat must be stored immediately in designated storage rooms.

10) Detergents, disinfectants, and similar substances should be stored in a secure place, in order to avoid contamination of meat or packaging material. Handling of such material must avoid any possibility of contamination of fresh meat or wrapping or packaging material.

IX. Storage

1. General

A. The entire cold storage must be under FSIS inspection.

B. Inventory records of incoming and exported products must be maintained.

C. The storage room (s) intended for EU product must be identified.

D. Meat cutting, processing, bulking, packing, and repacking are excluded activities.

E. Condensation resulting from refrigeration must be drained without the possibility of contaminating meat.

F. Freezer and holding coolers for packaged and unpackaged product must contain a recording thermometer or a recording telethermometer.

2. Chilling Fresh Meat

A. After postmortem inspection, fresh meat must be chilled and kept at a constant internal temperature of not more than 44.6 F (+7°C) for carcasses and cuts, and 37.4 F (+3°C) for offal.

3. Freezing Fresh Meat

A. Freezing compartments must contain a recording thermometer or a recording telethermometer.

B. Fresh meat must come directly from an approved slaughterhouse or an approved cutting plant to the freezer.

C. Fresh meat may be frozen in rooms of the same establishment where the meat has been slaughtered and/or prepared.

D. Frozen meat must reach an internal temperature of 10.4 F (-12°C) or lower, and may not be stored at higher temperatures.

E. All frozen meat must bear a mark indicating the month and year it was frozen.

F. Nothing may be stored in the freezing or chilling rooms if there is a risk of contaminating the product, unless the meat is packaged and stored separately.

X. Transportation

1. The IIC must ensure chat specifications for transport vehicles and loading conditions for meat are met:

A. Vehicle or Container Specifications

1) Fresh meat must be transported in airtight vehicles or containers that can maintain the temperatures specified earlier, i.e., 44.6 F (+7°C) for chilled meat; 37.4 F (+3°C) for chilled offal; and 10.4 F (-12°C) for frozen meat.

2) Fresh meat may not be transported in a vehicle or container unless it has been sanitized.

3) The inside surfaces of transportation containers must be made of corrosion-resistant material that does not affect the organoliptic qualities of the meat and does not render the meat harmful to human health.

4) Surfaces of containers must be smooth, easy to clean and disinfect, and made of corrosion-resistant material.

5) Containers must be able to protect the meat from insects, dust, and water.

6) Carcasses, half carcasses cut into no more than three wholesale cuts, and quarters and other unpackaged meat must be suspended so that the meat cannot touch the floor. The fittings for suspending the meat must be made of corrosion-resistant material.

7) It is not necessary to suspend frozen, hygienically packaged meat.

8) Meat transported by air need not be suspended if it is hygienically loaded, held, and unloaded in corrosion-resistant equipment and facilities.

9) Other unpackaged cuts and offal must be suspended or placed on supports, or contained in corrosion-resistant containers. Supports, packaging, or containers for this material must meet hygiene requirements.

10) Offal must always be transported in strong, waterproof, greaseproof packaging. That packaging may be reused only after being cleaned and sanitized.

B. Sanitary Transportation

1) No means of transporting meat may also be used for transporting live animals or any material that may contaminate the meat.

2) No product that may contaminate meat may be transported at the same time as the meat, unless appropriate and approved precautions are taken.

3) Packaged meat must be transported separately from unpackaged meat, unless an adequate physical barrier is provided to keep the two separated.

4) Stomachs must be scalded or cleaned; heads and feet must be skinned or scalded and depilated before being transported with either packaged or unpackaged meat.

C. Livestock Trucks

Officially, authorized cleaning and disinfection facilities must be provided.

XI. Water Testing Requirements

1. The initial water testing requirements are as follows:

TEST	SAMPLE SIZE	TEMPERATURE	MAXIMUM CONE
Total coliforms	100 ml	37	Membrane - 0 Or MPN <1
Fecal coliforms	100 ml	37	Membrane filter - 0 Or MPN <1
Fecal streptococci	100 ml	37	Membrane filter – 0 Or MPN <1
Sulphite-reducing clostridia	20 ml	37	MPN <1
Total Plate Count	1 ml	37	Guide level – 10
	1 ml	22	Guide Level - 100

2. Subsequent water testing

A. Frequency

1) Annually, if municipal source of water and no intermediate storage in the plant.

2) Monthly, if private source of water or intermediate storage is used.

3) Two examinations are required

a) Total plate count at 37 C and 22 C incubated for a minimum of 72 hours.

b) Total coliform at 37 C incubated for a minimum of 48 hours.

B. Sampling

1) Samples must be taken from randomly selected water taps within the establishments.

2) A diagram of tap locations and log of which taps have been sampled should also be maintained.

C. Test results

1) If test results are not within the required parameters, immediate retesting must be done. Contact Export Coordination Division for retest information.

D. Chlorination testing

1) A daily chlorination test is required if private water is used and chlorination is required for potability.

E. Cold Storages

1) Water testing requirements do not apply to cold storage facilities if only packaged meat is handled.

XII. Residue Testing Requirements

1. All slaughter establishments approved for export of meat and/or offals to the EU are required to participate in the EU Residue Testing Program. Only those plants that participate in this residue program will be able to receive documents for the export of products to the EU market.
2. The cost of analysis is the responsibility of the establishment management. Questions concerning costs may be addressed to: Webb Technical Group (919) 787-9171; or Warren Analytical Lab (800) 945-6669; or Texas Veterinary Medical Diagnostic Lab (409) 845-3414.
3. The species, target compounds, and numbers of samples to be collected follow. The number of samples for each species is for the national population slaughtered by all participating plants of the species on a yearly basis. The number of samples to be collected at each establishment will be predicated by the number and the volume of those plants involved in the program that slaughters that species of animal.

A. Species and total number of analysis*

Per Residue Compound DES	Equine 200	Pork 200	Lamb Beef 25	Veal 25	Cow 50
Zeranol	200	200	25	25	100*
Trenbolone	200	200	25	25	100*
Thyrostats MGA	100	50	50	50	100
Clenuterol	200	50	50		100
Nortestosterone	50	50	25	25	---
Nitrofurans	50	50			50
Lead	200	100	50		100
Cadmium	200	100	50		100
Tranquilize	---	200	---	---	---
Beta Blockers		200			

4. Each EU approved slaughter establishment must address or fax a letter requesting participation in this residue-testing program to ECD, who will notify the IIC of the participating slaughter plant of the dates samples are to be collected, tissue to be collected, the residue to be analyzed for, and laboratory responsible for the analysis. The IIC is responsible for collecting the samples and forwarding it to the designated laboratory. Sampling and shipment of the samples may be delegated to plant management.

XIII. Trichinae Control

1. Fresh/frozen pork must be treated for the destruction of trichinae according to the following parameters.

A. Meat brought in frozen must be kept frozen.

B. The refrigeration capacity of the freezing room or cage must be able to reach and maintain the required temperature.

C. Insulated packaging should be removed before freezing, unless the meat has already reached the required temperature.

D. Product under treatment must be stored separately and under FSIS security.

E. Date and time of entry and exit of the lot into the treatment area must be recorded.

F. The temperature in the treatment area must be at least -13 F (-25 C). The temperature must be continuously recorded. It may not be recorded directly in the

cold airflow. The temperature-recording device must be kept under lock. Records should be kept for one year.

G. Meat up to 9.8 in (25 cm) thick must be frozen for at least 240 consecutive hours. Meat between 9.8 in and 19.7 in (25 and 50 cm) thick must be frozen for at least 480 consecutive hours. The freezing process cannot be used on meat with a greater thickness. The freezing time shall begin when the required temperature is reached in the treatment area.

H. As an alternative to the time and temperature indicated in F. and G. above, the EU has also accepted FSIS time and temperature requirements for the destruction of trichinae by freezing (CFR 318.10.c.2). To use FSIS methods, plant management must place a thermocouple in a selected product carton to monitor the temperature. Location of the thermocouple should be selected to assure that the thickest portion of the meat in the warmest part of the treatment area reaches the required temperatures. Location of the thermocouple must be acceptable to the IIC. Other parameters outlined in F. and G. above must be met.

2. Establishment management is responsible for this program. Management must organize and maintain the records to the satisfaction of the IIC.

3. Frozen horsemeat must also be treated for the destruction of trichinae according to the parameters outlined above.

4. Agricultural Marketing Service (AMS) has established an EU accepted program that allows the use of a trichinae detection method for chilled horsemeat. More information about this program can be obtained from EGD.

XIV. Export Certification

1. Only meat and offals produced at approved establishments and that meet the requirements described herein may be certified for export to the EU.

2. Obtain FSIS Form 9060-5, FSIS Form 9180-1 (MP-150), and FSIS Form 9180-2. Obtain FSIS Form 9180-3 (MP-141) for high quality beef or veal, as requested.

3. For horsemeat, obtain FSIS Form 9060-10, FSIS Form 9180-1 (MP-150), FSIS Form 9180-2, and either FSIS Form 9205-1 or FSIS Form 9205-2. The following statement must appear on FSIS form 9205-1:

   "Meat of soliped, each carcass of which has been subject to an examination for trichinae on a 5-gram sample, with negative result, by the digestion method described in Annex 1 of Council Directive 77/96/EEC."

4. All required certificates must be dated and signed by an FSIS veterinarian. Name and degree (DVM or equivalent) must be typed or printed after the signature.

5. The original copy of the health certification must accompany the meat during transportation.

XV. <u>FSIS Oversight Of Plant Operations</u>

1. Production modes

   A. Plants must be in an EU production mode whenever producing for EU export. It is not necessary that establishments be in an EU mode when producing for non-EU markets. However, for those establishments who do not wish to be in the EU mode at all times, a control program to assure that all EU requirements are met before beginning EU production is required. This program must be acceptable to the IIC. The plant must be in the EU mode during prescreening by ECD and during the EU review. See Section XVI.4.B and4.C.

2. Non-hormone-created beef and veal production

A. Each lot of cattle or veal must have originated from EU-approved origin premises. (Information about how feedlots and farms can become approved origin premises is available from the EU Mission in Washington.) Each lot must be accompanied by a producer affidavit certifying that the animals have not been created with anabolic compounds. The IIC should verify that each lot comes from an approved origin premises. A current list of approved origin premises can be obtained from ECD.

B. Product destined for the EU must be appropriately identified and segregated throughout movement. The control program must be satisfactory to the IIC.

C. Plant management must maintain a full set of documents to verify eligibility of non-hormone treated cattle. These documents include the producer affidavits, Origin Premises Approval List, and EU health mark label inventories.

3. Dairy/breeding cow product production

A. The producer must certify with an affidavit that each lot of animals presented for slaughter is a dairy/breeding cow and its meat or offal is intended for the EU.

B. Product destined for the EU must be appropriately identified and segregated throughout movement. The control program must be satisfactory to the IIC.

C. Shipping cartons are required to be stenciled or otherwise labeled "Cow Meat" or "Cow Offal."

D. The notation "Cow Meat" or "Cow Offal" as appropriate must be included in the remark section of FSIS Form 9060-5.

4. Veterinary oversight of approved establishments

A. Slaughter establishments must have constant veterinary presence.

B. Cutting/boning plants must be visited at least once a day by an official veterinarian while in EU production.

C. Cold storages must be visited periodically by an official veterinarian.

D. 4Written record of the routine oversight visits by official veterinarians should be available to the EU reviewer.

5. Compliance oversight by FSIS

A. The essential role in assuring compliance with the EU requirements during EU production is with the Inspector in Charge (IIC). If an approved plant does not comply with the EU requirements, the IIC should notify plant management of the non-compliance and request correction of the deficiency in a reasonable amount of time agreed to between IIC and management. If the deficiency is not corrected, the IIC should not allow use of the EU health mark label. See Section VII. The EU health mark label should be returned to the secured location until the deficiency has been corrected. Product not bearing the EU health mark label was not produced according to the EU requirements and is not eligible for export certification for export to an EU member state.

B. If the plant has repeated deficiencies, ECD should be notified through channels. Appropriate action will be initiated by ECD. Specific guidance regarding the EU requirements can be obtained from ECD.

XVI. Plant Approval Process

1. Plant management should obtain the Guideline for the Production of Fresh Meat for Export to the European Union. This document can be obtained from Export Coordination Division (ECD).

2. Plant management should review the requirements and do a self-evaluation of the facility. Questions regarding the application of the requirements to a specific facility can be directed to ECD.

3. If plant management is interested in pursuing an approval, they should submit a letter to ECD expressing their interest in EU approval.

4. The review process to gain approval has three parts:

   A. Letters of interest received by ECD will be passed Co the U.S. Meat Export Federation (MEF). MEF representatives will help FSIS inform the interested plant management of EU requirements and will do an initial review of the plant to determine if they are reasonably close to meeting the requirements. If MEF determines that the plant is likely to meet EU requirements, they will nominate the plant to ECD.

   B. Upon MEF nomination, an ECD staff officer will do an on-site review of the facility and determine its compliance with the EU requirements. The establishment must be operating in the EU mode during the ECD review. Additional consultation will be provided to plant management and the IIC by ECD if necessary to assist the plant in meeting the requirements. If it is determined that there is a high probability that the plant meets EU requirements, ECD will nominate the plant to the EU Commission for review.

   C. The EU has agreed to on-site review of those establishments nominated by ECD. All deficiencies identified during the ECD review must be corrected prior to the EU review. The establishment must be operating in the EU mode during the review by the EU official. If the EU reviewer determines that additional modifications are required by the facility, ECD will certify completion of the work without a second visit by the EU reviewer in most cases. After the EU receives certification that corrections have been made and the approval process in the EU is completed, the plant will be eligible to export. When ECD learns of approval from the EU, ECD will provide approval information Co 10 and plant management. The EU officials have the prerogative to revisit the plant before approval and on a yearly routine basis.

5. Specific questions about the acceptability of certain procedures, equipment, or plant layout will be addressed and resolved at the time of the EU reviewer's inspection of the plant. Unique situations and conditions arise in every facility. They will be resolved on-site with discussion between the EU reviewer and the IIC. The ECD staff officer will also participate in the discussion and provide interpretation. Because of the unique nature of many plants, this one on one approach to problem solving is a key element of the USDA/EU agreement. Agreement reached between the three parties at the time of the review is valid and must be in place during EU production at the facility. Questions that arise after plant approval because of changes in the facility should be directed by the IIC through channels to Slaughter Operations Staff (SOS). SOS will consult with ECD as these questions arise.

ANNEX CC
ISO 9000 REQUIREMENTS

Ultimately management is responsible for the quality of products and services that are provided by the facility. To ensure that a facility's quality system is functioning accordingly, the ISO 9000 standard requires that a member of the MONGOLIAN FIRM management team be appointed to oversee all quality-related activities. This person is known as the management quality control representative. Hereinafter refereed to as (***MQCR)***

The ***MQCR*** should be a member of management and should possess rank and authority within the facility to be able to establish, implement and maintain a quality system that meets the requirements of the applicable ISO 9000 international standard.

The overall goal of the **MQCR** is to assure that the facility provides products and services that meet the customer's specifications. The ***MQCR*** has ultimate responsibility for creating and implementing the facility's quality policy. The quality policy is management's stated public commitment to the quality of the facility's products and services. The policy must be relevant to the supplier's organizational goals and the expectations and needs of its customers, and it must be *documented*. In order to carry out the goals of the quality policy, all employees who manage, perform, and verify work affecting quality should have the organizational freedom and authority to;

A) Initiate action to prevent the occurrence of any nonconformity's relating to the product or services, process and quality system (this applies to every employee);

B) Identify and record any problems relating to the product or service, process and quality system;

C) Initiate, recommend or provide solutions through designated channels;

D) Verify the implementation of solution (this is done by internal/external auditors):

E) Control further processing, delivery or installation of any nonconforming products or services until the unsatisfactory condition has been corrected.

To ensure that the quality policies and practices are being carried out effectively, trained personnel must conduct internal audits on a regularly scheduled, documented basis. The ***MQCR*** must report on the performance of the quality systems to management so that improvements can be made to the system.

Periodically, the MONGOLIAN FIRM's quality system must undergo thorough management review to ensure that the quality system is continuing to satisfy the requirements of both the international standard and the firm's stated quality policy and objectives. This is done under the authority of the ***MQCR.*** The schedule for quality system review can be adjusted in accordance with experience and results. Each quality systems review should consider, at a minimum:

- The results of internal quality audits
- Management effectiveness
- Defects and irregularities
- Resolution of customer complaints
- Solutions to quality problems

- Implementation of past solutions
- Handling of nonconforming product
- Results of statistical score-keeping tools
- Impact of quality methods on actual results

QUALITY SYSTEM

What are the elements of the supplier's quality system?

The MONGOLIAN FIRM 's quality system is the direct result of management's philosophy and decisions concerning quality. It is a documented system whose chief aim is to assure that MONGOLIAN FIRM's products and services meet customer requirements.

To ensure customer satisfaction, the **MQCR** must prepare a quality manual that addresses all of the requirements of the ISO 9000 standard, as well as the firm's stated quality policy. The manual should reference documented procedures and work instructions to support the specified requirements within quality manual, and it must outline the structure of the documentation used in the quality system.

MONGOLIAN FIRM's **MQCR** must define and document how the requirements for quality will be met. In considering this, the elements of the MONGOLIAN FIRM's quality system should include:

- The preparation of quality plans and documented procedures that concur with the requirements of the international standard and MONGOLIAN FIRM's stated quality policy.
- The identification and acquisition if any controls, processes, equipment, fixtures, resources and skills that may be needed to achieve the required quality.
- Documented means for identifying customer requirements, both objective and subjective, and for translating those customers' requirements effectively into the design, production and delivery of product and services.
- The updating of quality control, inspection and testing techniques, and the development of new instrumentation, as necessary.
- Measurement, testing, and control methodologies equipment for assessing quality, which utilize recognized procedures and meet documented external standards, as appropriate to process(es) in question.
- A system for evaluating the process capability that allows sufficient lead-time for anticipated capability requirements to be met.
- Standards of acceptability (tolerances) which must be clarified for product or service features and requirements.
- The preparation of quality records

The MONGOLIAN FIRM's quality systems must be accessible to and easily understood by all personnel whose duties and activities have any bearing upon quality. It should take into account all facility functions and should provide for the keeping of pertinent records.

CONTRACT REVIEW

How should MONGOLIAN FIRM manage its contracts?

MONGOLIAN FIRM must establish documented procedures for creating, coordinating and reviewing customer contracts. Before a contract or submission of tender can be accepted, the firm must verify that:

- The customer requirements are clearly documented and understood. (If an order is received verbally, the firm must ensure that the order requirements are clear before their acceptance.)

- Any discrepancies in the contract or order requirements and those in the tender are satisfactorily resolved with the customer and/or supplier in advance.

- All contract or order conditions are well within the MONGOLIAN FIRM's capabilities.

MONGOLIAN FIRM must also establish procedure for contract amendments. The procedure should specify how amendments are to be made to a contract and how the change is correctly transferred within MONGOLIAN FIRM's organization. Records must be maintained of all contract reviews.

DESIGN CONTROL

How should MONGOLIAN FIRM's MQCR manage the design function?

The **MQCR** must establish and maintain documented procedures to control and verify the design of a product to ensure that all of the customer's specified requirements are met. To that end, the MONGOLIAN FIRM prepares plans for each design and development activity. The plans describe these activities and define the responsibility for their implementation. The plans must be updated as the design evolves.

The documented design system should include:

- A documented organizational structure that clearly specifies the responsibilities of each design and development activity.

- Clearly defined interfaces among the design/development function and its constituencies.

- Means to assure that the design/development function has all of the necessary resources and trained personnel.

- A system for gathering design input, documenting it, resolving ambiguities and translating input into the design process.

- A system for assuring that product and service designs meet input requirements; make reference to acceptance criteria; meet all relevant laws and regulations; and anticipate safety standards.

- A system to verify that design output meets all specified design requirements; reference acceptance criteria; and identifies design characteristics that are crucial to the safe and proper function of the product (i.e. operating, storage, handling, maintenance, and disposal requirements).

- A procedure for verifying the appropriateness of design for products and services by means of conducting design reviews, laboratory and field tests, comparative studies, etc. Representatives concerned with all functions of the design stage must carry out the design review process. Records of such reviews must be maintained.

- A system for validating designs to ensure that the final product conforms to the defined user needs and customer requirements. Validation is normally performed under defined operating conditions and on the final product, but it is sometimes necessary in earlier stages of production.

- Procedures for reviewing and adjusting the design and development system as necessitated by circumstances. All design changes must be identified, documented, reviewed and approved by authorized personnel before their implementation.

DOCUMENT AND DATA CONTROL

How should the MONGOLIAN FIRM control and revise quality- related documents and data?

MONGOLIAN FIRM must administer a documented system for the creation, publication, distribution, use and revision of all documents and data - including documents of external origin- related to the quality system and the requirements of the ISO 9000 International Standard.

The documents and data specifically include the quality manual, all referenced procedures and operating instructions, and other documents central to the design, production, and distribution of products and services.

Documents and data must be reviewed and approved for adequacy by authorized personnel prior to issuance.

The document control system should ensure that:

- Up-to-date editions of relevant documents are readily accessible by the personnel who need them.

- Superseded documents are promptly removed from circulation. Obsolete documents can be retained for legal and/or knowledge preservation purposes, but must be suitable identified.

- A master list of quality related documentation and data is maintained, clearly denoting the edition numbers and dates of the up-to-date issues, to preclude the use of any invalid or obsolete documents. Any changes made to documents and data must be reviewed and approved by the same authorized- personnel that preformed the original review, unless management decides otherwise.

PURCHASING

How should the MONGOLIAN FIRM control the purchasing function?

The firm must establish and maintain documented procedures to ensure that products purchased from subcontractors meet specified requirements. The procedures should provide for the following:

- All subcontractors must be chosen on the basis of documented capability, past experiments, and/or demonstrated ability to meet specifications.

- The extent of control exercised by MONGOLIAN FIRM over subcontractors must be defined. Control should be dependent upon the type of product being purchased, the impact the subcontractors' product will have on the quality of the final product, and the past performance of subcontractors.

- *Records of acceptable* subcontractors must be maintained.

- All purchasing documents should include data which thoroughly describes the products/services concerned, including, where appropriate, the following:

a) Name, type, class, grade or other positive identification.

b) Specifications, drawings, process requirements, inspection instructions, and other relevant technical data, including requirements for approval or qualification of product, procedures, process equipment and personnel.

c) The title numbers and issue of the quality standard system to be applied.

Prior to releasing a product, MONGOLIAN FIRM must review and approve purchasing documents to make sure they are acceptable and meet the customer's specified requirements.

In cases where the firm chooses to verify purchased products at the supplier and subcontractor's premises, the supplier must specify, in the purchasing documents, the arrangements for verifying product and the method to be used for product release.

When a contract specifies that the supplier's customer (MONGOLIAN FIRM) shall be afforded the right to verify purchased products at the subcontractors' premises, it does not absolve the supplier from the responsibility to provide acceptable product, nor does it preclude subsequent rejection by the customer.

PRODUCT IDENTIFICATION AND TRACTABILITY

What actions should the supplier take to assure identification and tractability of its products and services?

Identification and tractability are especially vital issues for those suppliers who furnish products and services that may be subject to recall if found to be nonconforming, hazardous, or in conflict with laws, regulations or statutes.

Where appropriate, MONGOLIAN FIRM must establish and maintain documented procedures for product identification and tractability throughout all stages of production, from design through production, delivery, installation, and use.

When tractability is a specified requirement, the supplier must establish a procedure for the unique identification of products, individually or in batches. In all cases, records of identification and tractability must be carefully maintained.

PROCESS CONTROL

How should MONGOLIAN FIRM control the production process?

The firm must carry out all production, installation, and servicing processes (which directly affect the quality of products and services) under a system that specifies thorough planning and control.

The system must include:

- Documented procedures defining the manner of production, installation, and servicing, where the absence of such procedures could adversely affect quality.
- Provision of appropriate equipment, facilities, and supplies.
- Adherence to standards, laws, codes, quality plans, and/or documented procedures.
- Monitoring and control of identified crucial product characteristics at appropriate points in the process.
- The approval of processes and equipment as appropriate.
- Documented and updated work instructions specifying the steps and yields required for each task.
- Proper maintenance of equipment to ensure the continued production of quality products.
- Monitoring/control of process parameters (formulas).

When a process cannot be verified through the inspection and testing of the product, and when deficiencies in the process don't become apparent until the product is already in use, qualified operators pre-qualify, monitor, and control the process to ensure that specified requirements are met.

Records must be maintained for qualified processes, equipment, and personnel as appropriate.

INSPECTION AND TESTING

What procedures should the supplier follow for inspection and testing?

The firm must establish and maintain documented procedures for inspection and testing at each appropriate phase to ensure that the customer's specified product requirements are met.

The required inspection and testing, and the necessary records that have to be established, must be detailed in the MONGOLIAN FIRM's "Quality-Plan" or documented procedures.

Inspection and testing procedures must provide for the following:

- MONGOLIAN FIRM must ensure that incoming product is not used or processed until it has been inspected or otherwise verified (in accordance with the firm's quality plan or documented procedures) as being in conformance with the specified requirements.
- Before the inspection, MONGOLIAN FIRM must consider the amount of control that was exercised at the subcontractor's premises and the recorded evidence of conformance that was provided.
- The **MQCR** must ensure that all products or services exempted from the receiving inspection procedure for reason of urgency are clearly identified and made traceable so they can be retrieved at any point in the process should the need arise.
- In-process inspection and testing must be clearly documented by the quality plan or documented procedures. The product must be held until the required inspection and tests

have been completed or the necessary reports have been received and verified (except when a product is released under positive-recall procedures).

- The final inspection process must be carried out in accordance with the quality plan or documented procedures. The process must verify conformance to the specified requirements. No product can be dispatched until all of the activities specified in the quality plan or documented procedures have been satisfactorily completed, documented and authorized.

- Records must be established and maintained to provide evidence that the product or service has been inspected and/or tested. These records should clearly state whether the product passed or failed the inspection and associated test. The records must also identify the authority figure that Okays the release of the product.

CONTROL OF INSPECTION, MEASURING AND TEST EQUIPMENT

What is required with respect to inspection, measuring and test equipment?

In order to demonstrate that a product or service is in conformance to its specified requirements, the **MQCR** must establish and maintain documented procedures to control, calibrate and maintain inspection, measuring, and testing equipment (including test software).

The measurement uncertainty of the testing equipment must be known and it must be consistent with the required measurement capability. Control procedures must include the following elements:

- The **MQCR** must select appropriate inspection; measuring and test equipment that meets identified and documented requirements for accuracy and precision.

- All inspection, measuring, and test equipment must be identified and calibrated against equipment that is known to be certified to internationally or nationally recognized standards. Where no such standards exists, the basis for calibration must be clearly documented.

- The calibration process must be defined. The process should include details of equipment type, unique identification, location, frequency of checks, check method, acceptance criteria, and the actions taken when unsatisfactory results appear.

- Inspection, measuring, and test equipment must be identified by suitable means (i.e., stickers, labels, tags, markings, etc.) to show its calibration status. Records of the calibration status must be retained.

- When inspection, measuring, and test equipment is found to be out of calibration, the supplier must assess and document the validity of previous inspection and test results.

- The supplier must ensure suitable environmental conditions for all calibrations, inspections, measurements, and tests that are conducted.

- The supplier must safeguard the handling, preservation and storage of inspection, measuring, and test equipment to ensure that it is accurate and fit for future use. Inspection, measuring, and test facilities, including test hardware and software, must also be protected from adjustments which would invalidate the calibration setting.

- If the test software or hardware is used for inspection purposes, the supplier must check the equipment to prove that it is capable of verifying the conformance or nonconformance of a

product. The software or hardware must be rechecked at prescribed intervals determined by the supplier. Records must be maintained as evidence of control.

- If technical data is a specified requirement for inspection, measuring, and test equipment, the supplier must make the data available to the customer so the customer can verify that the equipment is functioning properly.

INSPECTION AND TEST STATUS

How should the MQCR identify the inspection and test status of products and services in production?

The **MQCR** must establish and maintain documented procedures to ensure that the test status of products and services is continuously identified throughout the production process. The system of identification may be visual (i.e., stickers, tags, labels, markings, etc.), or it may be organized by physical location or by some other clearly documented means.

The inspection and test status of products and services should be easily ascertainable in order to prevent nonconforming products and services from being dispatched, used, or installed.

The MONGOLIAN FIRM's procedures must include record-keeping methods adequate to document this system and the persons responsible for its administration.

CONTROL OF NONCONFORMING PRODUCT

How should the supplier control nonconforming product?

The firm must establish and maintain documented procedures for the control of non-conforming products and services. The object of the procedures is to locate the non-conforming product as soon as possible in the system and to ensure that such non-conforming products or services do not inadvertently reach customers. Elements of the procedures may include the following, as appropriate:

- The control system for non-conforming products or services must provide for the identification, documentation, evaluation, segregation (when practical), and disposition of the nonconforming product or service. The nonconformance must be reported to all parties concerned.

- Nonconforming products and services must be reviewed in accordance with the documented procedures. They may be:

    a) Reworked to meet the specified requirements

    b) Accepted with or without repair by concession

    c) Rejected or scrapped

When required by contract, the proposed use or repair of a non-conforming product or service must be reported.

Records of detection and of disposition of non-conformance must be maintained, as appropriate.

- Repaired and/or reworked product must be re-inspected in accordance with the documented procedures or quality plan.

CORRECTIVE AND PREVENTIVE ACTION

What types of corrective and preventive actions should the supplier implement?

The **MQCR** must establish and maintain documented procedures for implementing corrective and preventive action. The procedures should detail steps for detecting the causes of non-conformances, formulating corrective and preventive actions, and implementing the actions. The firm must execute and record any changes to the documented procedures resulting from corrective or preventive action.

Procedures for corrective and preventive action should include:

Corrective Action

- The effective handling of customer complaints and reports of product non-conformities.

- An investigation of the cause of non-conformance relating to the product or service, process, and quality systems. The results of the investigation must be recorded.

- The **MQCR** must determine what corrective action needs to be taken to eliminate the cause of non-conformance.

- A system of control must be in place to ensure that corrective action is taken and that it is effective.

PREVENTIVE ACTION

- To detect, analyze, and eliminate potential causes of nonconformity, the **MQCR** must study the appropriate sources of information, such as processes and work operations, which affect product quality, concessions, audit results, quality records, service reports, and customer complaints.

- The **MQCR** must determine what steps are needed to handle any problems requiring preventive action.

- The firm must initiate preventive action and apply controls to ensure that it is affective.

- The firm must ensure that relevant information on actions taken is submitted for management review.

HANDLING, STORAGE, PACKAGING, PRESERVATION AND DELIVERY

What should the facility do to protect the quality of products and services?

The **MQCR** must establish and maintain documented procedures to ensure the protection of products and services at all places, from inception through installation. The procedures should include the following:

- The firm must provide appropriate methods of handling to protect products from damage or deterioration.

- MONGOLIAN FIRM must use secured storage areas or stock rooms to protect products from damage, deterioration, theft, or misuse prior to delivery. Appropriate methods for authorizing receipt to and dispatch from such areas must be stipulated, and the condition of products in stock must be assessed at appropriate intervals to evaluate the effectiveness of storage measures.

- MONGOLIAN FIRM must control packing**, packaging**, and marking processes (including materials used) to ensure conformance to specified requirements and prevent unauthorized use.

- MONGOLIAN FIRM must apply appropriate methods for the **preservation** and segregation of product while under the firm's control.

- MONGOLIAN FIRM must ensure that products are protected during the distribution process.

CONTROL OF QUALITY RECORDS

What quality system records are required?

MONGOLIAN FIRM must establish and maintain documentation procedures for identifying, collecting, indexing, accessing, filing, storage, maintaining, and disposing of quality records.

Quality records (hard copies, computer disks, or any other form of media) must be maintained to demonstrate that a product or service is in conformance to specified requirements and that operation of the quality system is effective. Any pertinent quality records submitted by a subcontractor must also be included in MONGOLIAN FIRM's data.

All quality records must be stored in a suitable environment to prevent damage, deterioration, and loss and must be retained in such a way that they can be readily retrieved. The **MQCR** determines the retention times for these records. When a contract stipulates that quality records must be made available to the customer for evaluation purposes, the supplier and customer must agree upon the length of time that the records will be retained.

INTERNAL QUALITY AUDITS

How should management monitor quality?

MONGOLIAN FIRM must establish documentation procedures for planning and conducting regular internal audits of the quality system. The purpose of the audits is to determine the degree to which quality activities are being conducted and the related effectiveness of quality activities, areas of non-conformities, and action items.

Internal audits must be scheduled for particular areas of MONGOLIAN FIRM's facility based on:

a) The importance of the area in question

b) The results of past audits

c) The number, magnitude, and seriousness of non-conformances traceable to the process area.

Trained authorized personnel whose regular duties entail no responsibility for the area(s) being audited must carry out internal audits.

The results of the audits must be recorded and brought to the attention of management personnel having responsibility in the area audited.

If any deficiencies are found during the audit, management personnel for the area are responsible for taking timely corrective action.

The firm must perform follow-up activities to verify and record the implementation and effectiveness of the corrective action taken

TRAINING

What types of training programs are required?

MONGOLIAN FIRM must establish and maintain documented procedures for the implementation of a training program to ensure that all personnel can carry out the duties consistently with the objectives of the quality system. The training program must:

- Have quality personnel who are assigned specific tasks. Employees can be qualified on the basis of their education, training, and/or experience, as required.
- Identify skill shortages by means of examinations or other techniques.
- Secure the appropriate training resources.
- Verify training effectiveness by means of examinations or other techniques.
- Conduct post-training monitoring, as appropriate

Appropriate records of training and competence levels must be maintained for each employee.

SERVICING CUSTOMERS

How should MONGOLIAN FIRM provide service to customers?

In cases where serving is a specified requirement (large retailers), the firm must establish and maintain documentation procedures for performing, verifying, and reporting that the service is appropriate to the needs of the customers and the marketplace.

Appropriate records must be maintained for all service-related activities.

STATISTICAL TECHNIQUES

What are the requirements for statistical techniques?

The **MQCR** must identify the need for statistical techniques that are required for establishing, controlling, and verifying process capabilities and product characteristics (Organoleptic Testing).

MONGOLIAN FIRM must establish and maintain documented procedures to implement and control the application of the statistical techniques deemed to be appropriate for the effective operation of the quality system. In particular, the procedures for selecting samples, acceptance rules, process capability, lot (batch) screening, and the classification of characteristics must be formulated and documented.

ANNEX DD
THE AUCTION MARKETPLACE

Prepared by William Albanos Jr., Ph.D.
For Information Purposes
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An auction market is where bidding is done by "public attendance" and everyone knows the outcome of the transaction. This is in contrast to business by "private treaty," which simply means that price is arrived at by buyer and seller bargaining in privacy—the outcome (price or other terms of the transaction) is only known to the participants.

Operational Features:

A farmer would consign his livestock to the cooperative Agent at the pooling location. However, it would be good business practice for an farmer with large amounts of livestock to contact the cooperative agent several days prior to and notify him of intentions to deliver. It is a common practice for auction managers to visit patrons (farmers) on request, inspect their livestock, and advise the patron regarding that inspection, market conditions, and probable value of the livestock.

Upon delivery, the livestock are penned or marked in a way to maintain identity of each individual owner. Auction operators usually follow a consistent order in sales by species. That is hogs may be sold first, followed by sheep, and then cattle. The cooperative agent on-site would short and shape-up lots that in his judgement would enhance the sale. The skill and expertise of a cooperative agent comes in knowing when he has the best possible offer for a pen of livestock on that particular day. If he is unable to obtain a reasonable offer, he may hold the livestock over for the following day's market, but this involves risk and some expense and is not common operating procedure. In most cases, the cooperative agent provides the starting price for livestock.

The price discovery in auction markets is by public bidding (practically all auctions in the U.S. have adopted ascending, or English, bidding) in response to auctioneer's chant. The other method is opposite in that bidding is declining from the starting bid, Dutch bidding. The starter attempts to put the initial price just slightly below what he thinks the livestock will go for. To the extent he is able to judge this value, his ploy obviates the necessity of needless bidding. Following the auctioneer's chant, bidding progresses to higher levels until no one is willing to advance the last offer, and livestock is sold to the highest bidder. Depending on local custom and/or class of livestock involved, the selling may be done on a per-head basis or by weight.

Upon completion of sale, the livestock are weighted and delivered to the pens of the buyer, or holding pens, pending shipping instructions. Title of ownership passes to the buyer upon the weighing.

Details of the transaction (price, weight, and the name of the buyer) are transmitted to the cooperative's office. An "account of sale" is prepared for the shipper giving this information and calculation of gross proceeds, itemized charges, and net proceeds. This, along with a check for the net proceeds, is transmitted to the shipper. Itemized charges include the trucking charge (which is forwarded directly to the trucker); commission charges, which are retained by the cooperative for its selling service; a small deduction per head, which is transmitted to the Livestock and Meat Promotion Agency and used for industry promotional purposes; a small fee for use by the pooling yard for feed and insurance. Some pooling yards assess small "ring fee" to cover bonding which helps insure a shipper that he will receive payment.

Alternative Weighing Procedures:

Several different procedures are followed in obtaining sale weight. Many modern auctions are constructed so that the scale platform acts as the sale ring. In addition, many have circuitry to an electronic display that exhibits total weight, number of head, and average weight in full view of the audience. Some markets, however, locate the scales on the "inside" of the sale ring, and livestock are weighted prior to entering the ring. In this case, the weight can be announced or flashed on a lighted sign. This eliminates the need for buyer to estimate weight. It is not uncommon, however, for the scale to be located on the "outside," allowing the cooperative agent to "catch" the weight of a draft of animals or a part of a draft prior to final sale so that bidders will have an estimate of average weight while bidding. In this case, however, the official weight is taken after the sale. At some markets, weights are taken as livestock is unloaded at delivery to the pooling site, although this is not common practice.

Alternative Pricing Procedures:

U.S. regulators allow auction operators to purchase livestock that otherwise would sell at a price below what would be considered a competitively established level for that particular class, grade and weight of animal at that time. This practice known as "market support," is designed to provide a degree of price protection to sellers at times when buying activity is slack. Other means of price protection are also available to consignors:

One method is to set up a reservation price with the auction operator prior to sale; this price may be noted on the ticket accompanying the livestock into the sale ring. Reservation price means that if bids do not reach that price, the livestock are not sold.

Another method is for the consignor to declare 'no sale" at the time the auctioneer has received the last bid. However, this necessitates the consignor or his representative being present during the sale.

A third alternative—one definitely frowned upon—is for the consignor to bid on his own livestock or arrange for a cohort to do so. This is known as "by-bidding."

Innovative Auction Markets:

Another innovation in livestock marketing is auctioning slaughtered animals on a carcass basis. This custom is only done on a limited basis at this time in the U.S. but has been more accepted in Ontario, Canada. Bidding proceeds on an agreed-upon base grade. After the animals have been slaughtered, price differentials are applied to the extent quality, yield, and other pre-agreed product standard attributes deviate from the base.

Additionally, a modernization in auction marketing is the electronic auction. Telephone auctions, commonly known as Tel-O-Auctions or Tele-Auctions, have been in use for many years in the U.S. and other countries. These represent a simple form of electronic marketing and consist of an interlocking system of telephone conference call set-ups whereby, as in other forms of electronic markets, traders in geographically separated locations can bid on livestock as described over the system. The livestock may be assembled at selected points or left on the producer's farm. Sorting and grading must be very precise because buyers are bidding on description—sight unseen. They must therefore have confidence in the grading system. However, this methodology could work nicely when the purchase will be based on a slaughtered carcass basis (as described above) and seeing the livestock in advance is meaningless. An alternative version of this process is called Teletype Auctions. Teletype auctions are similar to telephone auctions except that each buyer has direct communication though a teletype buying machine connected to a central computer instead of though voice communication with an auctioneer. Typically, a Dutch (regressive) auction method is used. Livestock may be assembled at a certain location prior to sale. Selling is by description, and the computer acts as the auctioneer, with automatic selling tape changing the price at pre-specific time intervals.

Another further advancement of this process is the use of a video screen so that prospective buyers can view the livestock. In contrast, to telephone auctions where the livestock is assembled at a particular place and buyers may be widely separated, use of video requires that the buyers assemble while the livestock may be left at widely separated farms.

Basic Criteria for Physical Facilities:

1. The holding pens must be organized (animals conclusively tagged) to hold the different species of animals in several categories:

    a) Clearly marked from the original farmers delivery;

    b) The pooled grouping made by the cooperative agent for improving sale price (this may be done for each farmers group or the gent must weight each farmers animals before mixing and the farmers receives the pooled price times the portion of the group weight of his animals;

c) The holding group for the each buyers account after the auction sale before shipment occurs;

2. Facilities must be available for watering and feeding any animals left for more than several hours.

3. Telephone or other communication devices must be available so the completed transactions and all the appropriate information associated with the sale be communicated immediately back to the main cooperative office.

4. The arena facilities should be so designed that there is a clear view between auctioneer and the potential buyers. Many buyers prefer not to display any clear signal as to when they are bidding. Many prefer to use undetectable signals only known to the auctioneer, e.g., touching one's ear, scratching one's head or any other prearranged signal that is not easily detected by the other buyers in the arena. Therefore, a clear view between the auctioneer and the buyers is needed. For example, the auctioneer may be on a raised platform or the reverse, in that the buyers could be on a raised platform—either way would do the trick.

5. Important also is the audible level of the activity. It is important that everyone can hear what is going on, therefore microphones or any other amplifying devices may be needed.

6. The level of lighting may also be an important factor as buyers must get a clear view of the animals that they are considering to bid on. Dark or crowded facilities would not lend themselves to clear and undistorted viewing by potential buyers.

7. A clearly visible and usually understood identification system will be needed. One system that works wells and can be used by both computer and man. This is a scheme wherein we use the first letter of the farmer's last name or the first letter of the company name plus some part of or the whole of their phone number. For example, let us say farmer Mr. Enkhbat Gerelkhuu’s phone number is 221-29; then his individual identification code would be G221 or G22129. For a firm, the process is the same: Bagakhangai Meat Company, whose phone is 234-09; his special identification code would be B234 or B23409. Using this methodology should result in very few duplication possibilities.

8. It is advisable that all documentation be forwarded to the main office where the final billings and other manipulation of data will be handled by qualified individuals, as they may not always be available at every pooling station when needed.

ANNEX EE

Expenses for the establishment of "Meat export promotion center" and its operation budget for two years

At the onset, the managers of the slaughter plants would not invest into the facilities due to possible lack of confidence about the importance of having market information. Therefore, a donating organization is recommended while participants gain confidence.

Table 1 Establishment of Office

Items of Expenses	Measure	Units Required	Unit Price	Total
Personal Computer	Pcs	2	2,500.00	5,000.00
Printer	Pcs	1	2,000.00	2,000.00
Copier	Pcs	1	1,500.00	1,500.00
Fax Machine	Pcs	1	500.00	500.00
Office Furniture	Set	1	1,000.00	1,000.00
Total				**10,000.00**

The price is based on the retail price of the latest models of the office hardware in Ulaanbaatar including 1-year guarantee and services.

Table 2 Office Overhead

Salary of Manager	**Man/Month**	**24**	**400**	**9600.00**
Salary of Information Officer	Man/Month	24	150	3,600.00
Telecommunications	Month	24	150	3,600.00
Rent of office space of 20 sq. meters	Month	24	160	3,840.00
Stationery	Month	24	50	1,200.00
Other	Month	24	50	1,200.00
Total				**23,040.00**

Activities

1. License
2. Training
3. Monthly journal on meat products
4. Project promotions
5. Market research
6. Exhibition
7. Animal supply research
8. Documentation

…..Etc…

There are many activities to be taken immediately in order to promote Mongolian meat to Russia and other countries. The main players are the owners and managers of the five slaughter plants, and their support is vital for the successful

operation of the center. After two years, the members will be in position to cover the expenses related to the center. The organization structure is the subject for the further discussion.

ANNEX FF

Russian Cattle Feeding Model

The animals are fed two different cycles of ration, one for the winter and one for the summer, as follows:

WINTER RATION: 50% Silage[10]; 40% concentrate (made at the farm); and 10-% vitamin meal. For young bulls, an artificial milk product is given. Dairy cows get 5% to 10% yellow beets[11]; hay 20%; concentrate 40%; plus minerals such as calcium, phosphate, and potassium, and 50 grams of salt.

SUMMER RATION: 50% grass fodder (chopped); 40% concentrate; 10% vitamin meal; and for young bulls, hay[12]. Dairy cows get 30% concentrate; 10% vitamin meal; 60% green grass (20% chopped and 40% pasture), plus same minerals as in winter.

The farm usually has enough seeds from their own production, but sometimes they buy some in. Cost is 700RB/ton. They also use potato technology from Holland and sometimes buy seed potatoes from them. They also have a storage facility for potatoes of 300 tons.

CROP PRODUCTION: The farm has two cycles of crops. The winter crops—winter wheat and winter rye; the summer crops—barley and oats. Additionally, they grow potatoes and yellow beets. All crop production is for animal feeding. The human food production for the 500 members of the collective are grown on their own plots at the their summer home, which is also located on the collective's land.

The shortage of fertilizer (due to high costs) has had a chilling effect on the crop yields. However, they are luckier than other collectives as they produce liquid manure from the 10,000 animals they are feeding.

INFORMATION ON EACH CROP

Winter Wheat: Planting is accomplished starting August 21 to September 1 and the harvest starts the following year from the end of July to August. The fields need about 300 kg/ha of fertilizer (potash, potassium, and nitrogen), but for the

[10] Silage is grass (clover, timothy, etc.) that is cut and stored for fermentation for at least one month before feeding to animals.
[11] Beets are 8-10% sugar content. Beets are peeled and fed to cows.
[12] Hay is produced from the stalks of feed grains after harvesting. Farm produces 2000 tons per season.

last four years they put on only 80 kg/ha. The crop yields about 3½ to 4 tones per ha.

Winter Rye: Planting is accomplished same as winter wheat. Approximate yields are 6 to 7 tons/ha, but should be 15 tons/ha if they had enough fertilizer.

Summer Barley and Oats: Planting is at the end of April until May 10. Fertilizer situation is the same predicament as above. They used only 50kg/ha this year. Crop germinates for 110 to 120 days; therefore, harvest starts mid-august for barley and end of August for oats. Crop yields are the same for both, about 3 to 3½ tons/ha.

The farm has 13 to 14 harvesters in operation and the harvest starts end of July and ends early September.

Beets and Potatoes: Beets yield 50 tons/ha and take 130 days to grow, while potatoes yield 18 to 20 tons/ha and take 110 to 120 days to germinate.

ANNEX GG

Information Needed for Application for a USDA-Certified Disease-Free Zone

Instructions: Please provide detailed answers (English translation required) to these questions.

1. The authority, organization, and infrastructure of the veterinary services organization in the region.
    - What veterinary force is available in the region for carrying out regulatory programs for livestock diseases?
    - Are all officers veterinarians?
    - What are the required procedures for specimen collection?
    - What diagnostic procedures and techniques are routinely followed for each disease agent of concern?
    - What laws, regulations, and policies are in effect (copies should be provided, English translation required)? For example, is waste feeding permitted and, if so, what restrictions apply (such as cooking the waste to specific temperatures and duration)?
    - What security measures are in place at ports of entry to control importation of materials that might carry disease agents of concern?
2. Disease status—i.e., is the restricted disease agent known to exist in the region? If “yes,” at what relevance? If “no,” when was the most recent diagnosis?
    - For each relevant hazard, is the pest or disease agent known to exist in the region?
    - If yes, at what prevalence?
    - If no, when was the most recent diagnosis or detection?
    - What breeds or species were affected?
    - How many cases were diagnosed and reported?
    - Is reporting the pest or disease agent required in the region?
    - If the pest or disease agent was present and subsequently eradicated, what methods were used for eradication?
    - What geographic and environmental characteristics of the exporting region may influence the prevalence of the pest or disease agent?
3. The status of adjacent regions with respect to the agent.

- For each relevant hazard, is the pest or disease agent known to exist, or has it existed previously, In any region adjacent to the region proposing the trade?
- If yes, at what prevalence?
- If no, when the most recent diagnosis?
- Are there any relevant factors about the adjacent regions that should be taken into account (e.g., size, distance from adjacent border to affected herds or animals)?

4. The extent of an active disease control program, if any, if the agent is known to exist in the region.
   - What is the extent of an active disease control program, if any, if the pest or disease agent is known to exist in the region, or recently existed in the region?
   - What epidemiological investigations are done to trace the source of infection?
   - Are infected or exposed animals or premised quarantined? If so, for how long?
   - Are affected premises monitored, and if so, how?
   - What tests are performed prior to releasing the quarantine?
   - What procedures are used to clean up affected premises?
   - What treatment regimes are followed?
   - What breeding practices are followed?
   - If depopulation is used, how are carcasses disposed of (are they salvaged at abattoirs)?
   - Is indemnity paid on destroyed animals?
   - Have premises thought to have been cleaned up later been found to still be affected?
5. The vaccination status of the region. When was the last vaccination? What is the extent of vaccination if it is currently used, and what vaccine is being used?
   - Is the ownership and use of vaccine allowed?
   - When was the last vaccination?
   - What is the extent vaccination if it is currently used?
   - What types of vaccine (live, modified live, killed) are used?

- Who may vaccinate (herd owners, veterinarians, etc.)?
- Are records kept on the use of vaccine?
- Who produces the vaccine?
- Is the administration of serum permitted? If so, by whom and under what conditions?

6. The degree to which the region is separated from adjacent regions of higher risk through physical or other barriers.
   - To what degree is the region separated from regions of higher risk through physical or other barriers?
7. The extent to which movement of animals and animal products is controlled from regions of higher risk, and the level of biosecurity regarding such movements
   - From what countries or regions does the requesting region import products that could potentially carry pest or disease agents of concern?
   - To what extent is the movement of such products controlled from regions of higher risk, and what is the level of biosecurity regarding such movements?
   - What test procedures are used?
   - Are animals quarantined that may carry the disease agents? If so, for how long and where?
   - Are import permits and health certificates required?
   - What other procedures are used?
8. Livestock demographics and marketing practices in the region.
   - How many herds, flocks, etc., of each relevant species are in the region?
   - How are they distributed (e.g., herd density, etc.)?
   - Where are the major livestock marketing centers?
   - What are the patterns of livestock movement within the region?
   - How are the animals transported and handled during market transactions?
9. The type and extent of disease surveillance in the region—e.g., is it passive and/or active; what is the quantity and quality of sampling and testing?
   - Are serum surveys conducted, and if so, how frequently, what sample sizes are used, and what has been found?
   - Is reporting of sick animals mandatory, and if so, what is the procedure (by whom and to whom) and what penalties are involved for failure to report?

- Are laboratory tests run on suspicious animals? If so, what procedures and to what extent (e.g., what proportion of suspicious cases are evaluated using each of the specific laboratory procedures)?
- Are quarantines imposed on premises with suspicious cases, pending final diagnosis?
- What other procedures are followed regarding suspicious cases?

10. Diagnostic laboratory capabilities
    - What diagnostic laboratory capabilities are there?
    - Are there laboratories approved for agent isolation, identification and typing (if yes, need names and addresses of each)?
    - If not, where specifically are such isolation, identification, and typing done?
    - What security measures are in place in laboratories within the region to prevent escape of biological agents?
    - What kind of training have the diagnostic personnel had regarding the specific disease agents of concern?
11. Policies and infrastructure for animal disease control in the region—i.e., emergency response capacity.
    - What policies and infrastructure exist for emergency response to outbreak situations?

ANNEX HH

LETTERS FROM BURGER KING AND MCDONALD'S

BURGER KING ☎ +61 2 99239260 17/06 '99 18:20 :01/01 NO:260

BURGER KING

17th June 1999

Dr Bill Albanos
The Meat Sheet
PO Box 124
West Mont, Il 60559
USA

Via Facsimile: 0011 1 630 963

Dear Dr Albanos,

Thank you for introducing Mongolian Beef Industry to Burger King Corporation Asia Pacific Region

Currently we source beef patties for the Region from Australia, USA and New Zealand. The annual usage of beef patties in the region is approximately 15 million kilogram. The usage is based on 450 restaurants present in Australia, New Zealand, Japan, Korea, Taiwan, Singapore, Malaysia, Thailand and Guam.

As at January 1999, Burger King Corporation and its franchise operated 10,000 restaurants in 50 states of America and in 53 countries and international territories around the world. Since the company's founding in 1954, Burger King® food has become synonymous with great flame-grilled taste and the HAVE IT YOUR WAY® food customising process. In fiscal year 1998, systemwide sales at Burger King® restaurants were $US10.3 billion. Burger King Corporation is a subsidiary of Diageo plc., one of the world's leading branded consumer products companies.

Please let me know when we can visit Mongolia to analyse beef quality, production capabilities, transportation and various costs.

If I can be of any more assistance, please let me know.

Kind Regards,

Parwaiz Shaukat
Procurement & Supply Director

cc: Steve Lash – Burger King Corporation, Miami

BURGER KING AUSTRALIA PTY LIMITED • Level 14, [illegible] • Telephone [illegible] • Fax [illegible]

15-JUN-1999 09:18 FROM MCDONALD'S CHINA (MCDC) TO 00216309632980 P.01/01

McDonald's China Development Company
19/F., China Overseas Building
139 Hennessy Road, Wanchai
Hong Kong
Tel : (852) 2529-5020, (852) 2821-8111
Fax : (852) 2527-9025

McDonald's
China Development Company

June 14, 1999

Dr William Albanos Jr
Fax: 630 963-2980

Dear Dr Albanos

I have received your fax on Jun 11, 1999 about the possibility on beef situation in the Mongolia.

It is very difficult for me to give you an adequate response. I do not know who you are and what your intentions are, so I can only respond the followings:

- Presently we are not interesting in developing Mongolia as a market yet
- From the beef sourcing issue stand point of view, from your description, I am not sure if this is a possibility
- Our potential suppliers must meet many standards that we require to have
- The supply chain management is more than just capacity of total production. I need to know many other factors such as cost structure, QA program, HACCP, transportation means and costs, GMP, import/export agreements.....etc.

Hope this will answer your questions.

Thank you.

Sincerely yours

Robert Ma
Vice President, Purchasing

TOTAL P.01